

## ABSTRACT

### EXAMINATION OF MIDDLE SCHOOL STUDENTS' PERCEPTIONS OF INCLUDING DEMOCRATIC PRACTICES IN AN ENVIRONMENTAL SERVICE-LEARNING PROJECT

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The purpose of this mixed-methods study was to gather data on middle school students' perceptions of including democratic practices in an environmental service-learning project. The study explored students' perceptions of their inclusion in helping plan curriculum and student participation in civic engagement. Seventh grade students' perceptions of the personal benefits gained due to their participation in the environmental service-learning project were explored. Additionally, the study investigated students' perceptions of benefits to the local community due to students' participation in the project.

Utilizing democratic practices in the classroom plays a critical role in supporting a democratic education; therefore, students were provided with the opportunity to be engaged in two democratic practices in a classroom project that also used curriculum integration in an environmentally-based situation. This study was based on the ideas underpinning democratic education and the work of Dewey and Beane as well as curriculum integration and the work of Apple and Beane, Drake, Fogarty, Hayes-Jacobs, and Pate, Homestead and McGinnis. This study focused on utilizing environmental education and service-learning as a vehicle for executing an integrated curriculum that fosters a democratic education.

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EXAMINATION OF MIDDLE SCHOOL STUDENTS' PERCEPTIONS  
OF INCLUDING DEMOCRATIC PRACTICES IN  
AN ENVIRONMENTAL SERVICE-LEARNING PROJECT

BY

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## DEDICATION

To Sheehan, Finnegan, Calum, and Irie.

May you know the power of hard work, dedication, and commitment as you continue to grow

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# CHAPTER 1

## INTRODUCTION TO THE STUDY

### Introduction

The U.S. is currently experiencing a decline in civic engagement (National Task Force on Civic Learning and Democratic Engagement, 2012). For civic engagement to thrive, education needs to follow the idea that democracy requires active participation and educators must enable students to practice democracy regularly. Kezar, Hartley, and Maxey (2012) explained that educators need to take action by understanding the opportunities democratic practices present and devise methods or practices to include students in important decision-making processes, particularly those that have the greatest impact on them.

Kaplan (1997) stated that “If we want children to learn democracy, then we must develop approaches to schooling that encourage children to live democracy” (p. 433). Students must be engaged in an education that provides direct opportunities for democratic experiences through experiential learning (Dewey, 1910, 1938; Giroux, 1989). Dewey (1916a, 1938) suggested that education needs to focus on educating students for the present, guiding students in their application of knowledge, and providing opportunities for growth in further experiences.

The Institute for Democratic Education in America (IDEA) outlines practices educators can utilize to foster a democratic education that focuses on relevancy to students’ lives and civic responsibility (Graves, 2011). According to Bennis (2013), educators can

implement democratic practices by including engaging and relevant experiences in the curriculum. Other practices include students' self-directed learning, allowing students to be part of the planning and decision-making concerning curriculum, and involving students in making connections to their community.

A democratic education connects students to the world around them and empowers them to make decisions that affect their place in society (Kaplan, 1997). Environmental service-learning, which can become a method of implementing democratic practices in education, provides students with a relevant curriculum that is based in civic engagement. Environmental service-learning projects allow students to work together not only with other students but with community members who are representative of those in the larger society. Environmental service-learning projects may provide real learning on the part of students, educators, and community members because they address what is at the heart of being a human being in a collective society (Senge, 1994). This centrally and purposefully connects experiential learning and democracy, supporting Dewey's social and political philosophy (Robertson, 1992). Environmental service-learning may engage students in a way that they learn the content without necessarily realizing it. When curriculum becomes relevant to students' lives, educators are able to see students flourish in a way they may not have in prior methods (Kaye, 2010). This also supports Dewey's theories behind active or experiential learning in that these forms of education are a representation of the true spirit of education.

Dewey (1938) acknowledged that many educators were providing students with experiential learning, but that these experiences were not beneficial because they were isolated and inapplicable to further experiences. He explained that these random experiential learning opportunities were disconnected from students, so the learning through these

compartmentalized experiences was not available for when the actual conditions of life required reflection on past experiences to deepen student learning through current experiences. This leads to missed opportunities in learning through experience because present learning is most important in its application in future learning. Educators can use an integrated curriculum to promote students' future experiences at the heart of education.

An integrated curriculum also gains students' interest because it may involve student input in the creation of what is being learned and how it is being learned. It is important that students help structure their learning because educators need to allow students to question the world around them and attempt to find possible answers or solutions to the problems they face as individuals and in their local community (National Middle School Association, 2003). Ongoing opportunities for community service may provide an improved gain in understanding politics and, hopefully, a desire to actively participate in ones' society in meaningful and positive ways (Hepburn, Niemi, & Chapman, 2000). For example, an integrated curriculum that has a focus in environmental education may allow students to work on an environmental concern within their community, to create active environmental stewards in the community, and to encourage future participation of environmental activism (Hungerford & Volk, 1990). This activism strengthens the democratic practice of civic engagement fundamental to a democratic society. However, there is a lack of research linking environmental service-learning projects to democratic practices of middle-school students. This dissertation study contributes to fields of research about middle-school education, democratic education, and environmental service-learning.

## Problem Statement

Although the 2010 National Assessment of Educational Progress (NAEP) suggested that almost all 8<sup>th</sup> and 12<sup>th</sup> graders should be provided with civic education, but only about 25% of students who are provided with civic education score at or above the proficiency level on civic knowledge. Therefore, students are not gaining the civic knowledge they need to become democratically active citizens. The future health of the U.S. democracy relies on making sure its citizens are both civically knowledgeable and civically responsible. To achieve this, our educational system needs to teach about democratic values and address democratic values in ways that are purposefully embedded *by* teachers and *for* students. Currently, however, most educators do not utilize democratic practices and, therefore, students do not have opportunities to highlight their democratic values (Koliba, 2000). This means that educators must utilize democratic practices such as allowing students to be involved in planning relevant curriculum and the practicing of civic engagement.

There is an abundance of research on the benefits of service-learning projects (Cress, Collier, & Reitenauer, 2005; Kaye, 2010; Keen & Baldwin, 2004; Kormacher, 1999; Langston, 1990; Sunal & Haas, 2002; Watkins & Braun, 2005). There is also considerable research on how to best instruct students in environmental service-learning projects (Korfmacher; Lege & Cawthorn, 2008; O'Meara & Niehaus, 2009; Schneller, 2008). However, there is limited research on how environmental service-learning projects can utilize democratic practices that are important to a democratic education. Therefore, this study aimed to fill this gap in existing research.

## Purpose of Research and Research Questions

The purpose of this study was to examine the experiences of middle-school students in an environmental service-learning project. This study sought to gain insight about how an environmental service-learning project affected the democratic practices of middle-school students. Additionally, this study investigated the students' perception of their personal benefits, in addition to community benefits, as a result of their participation in an environmental service-learning project.

Four research questions guided this study:

1. Do middle school students show a difference in their perceptions of student involvement in curriculum planning and civic engagement following their participation in an environmental service-learning project?
2. How do middle school students describe their experiences in participating in an environmental service-learning project regarding student involvement in curriculum planning and civic engagement?
3. How do middle school students describe their personal benefits as a result of participating in an environmental service-learning project?
4. How do middle school students describe benefits to their local community as a result of the students' participation in an environmental service-learning project?

## Conceptual Framework

The conceptual framework for this study focused on Dewey's ideas of democracy and education. Dewey (1976b) believed that democracy is best learned through democratic means



and that democratic practices, such as students planning relevant curriculum and gaining experience in civic engagement, can be those means.

The framework also focused on various theorists' work on curriculum integration (Beane, 1997; Fogarty, 2009; Hayes-Jacobs, 1989; Pate et al., 1997). Beane expressed that integration of curriculum allows students to find plausible answers to the questions formed by their natural curiosity. Beane believes that education should focus around issue-centered and meaningful learning. Other theorists (Hayes-Jacobs; Pate et al.) focus on curriculum integration beginning with a focus on a particular theme. If the curriculum begins with a theme involving an issue within the community, a service-learning project can be created that the students help to organize and implement and in which students can gain civic experience.

Through conceptualization of democratic schools with a focus on integrated curriculum, a foundation for a democratic education can be realized. Environmental service-learning is grounded in the pedagogy of a democratic education and integrated curriculum because it allows middle-school students to develop and utilize democratic practices focused around environmental concerns. Chapter 2 explains the conceptual framework in more depth and detail.

### A Democratic Education

Traditional curriculum may introduce democratic practices through social studies and/or civic education. However, focusing the education of democratic values in these two subject areas can be ineffective due to a greater demand for focusing on math and reading subjects that are regularly tested in the United States. This means that social studies and civic

education are often overlooked or not prioritized (Chi, Jastrzab, & Melchior, 2006), limiting the time to focus on the implementation of democratic practices.

Dewey (1938) suggested that present experience is valuable, but noted that “every experience lives on in further experiences” (p. 27). It is, therefore, the role of the educator to facilitate experiences based on each individual’s knowledge, oversee the direction of an educational experience, and utilize the surroundings so students extract everything necessary to heighten their experience. Perhaps even more important is the emphasis on putting the learner in command of developing the purposes of the learning activities and experiences. This allows the educator to guide students through their experience while keeping the students as democratic participants, which opens the door for further expansion in later experiences because they are free to explore new ways of observing, thinking, and decision-making.

According to Apple and Beane (2007), a democratic school is very similar to a democratic society because it is the way we choose to be with others. It is how we learn and live. It is the trust we put in ourselves and others, as a collective group, to accomplish things and come up with solutions to problems. For success, all members of the collective group, whether it is a classroom, school, community or society, must be willing to work toward the common good for all. It is of utmost importance that all members of the democratic school understand that democracy is an evolving idea and that the democratic process is what matters more than the final outcome.

### Curriculum Integration

Traditional curriculum is often planned at a disconnected, discipline-based level. When students go through their typical, fragmented schedule of moving from one discipline

to another, there is little time for them to make connections between disciplines. Therefore, it is nearly impossible for them to see skills that most educators are trying to teach them and/or that those skills, such as problem solving, should be transferred to all their learning. Often traditional curricula leave students unable to connect the content and skills they are learning to their lives. As Beane (1997) expressed, “When knowledge is seen simply as a collection of bits and pieces of information and skills organized by separate subjects or disciplines of knowledge, its uses and power are confined by their boundaries and, thus, diminished” (p.7).” For democracy to be taught as Dewey (1938) envisioned it, democratic experiences need to cross-curricular boundaries and involve all aspects of education.

Integrated curriculum begins at the thematic level and works toward defining how each discipline can relate content and skills to an overall theme (Hayes-Jacobs, 1989). Beane (1997) adds that curriculum should be focused around significant issues and integrated in a way that enhances opportunities for integration of personal and social growth. The goal is usually to focus on the theme and not on the individual discipline fields, which defines a curriculum as integrated rather than multidisciplinary. According to Beane, curriculum integration involves the integration of experiences, social aspects, knowledge, and curriculum design. Therefore, curriculum integration is designed to allow students to make meaningful connections and develop a richer understanding of content and ideas (Fogarty, 2009).

Through focusing on integrative and meaningful educational experiences in the present, these experiences become a part of the students’ entire life and parallel what they will need to do as adults. Because adults tend to arrive at solutions by gathering information and data from a large selection of resources in a continuous and un-fragmented way, it is necessary to show students the importance of continual acquisition of information when solving problems

(Hayes-Jacobs, 1989). Beane (1997) supported this, stating that learning should “focus on life as it is lived now rather than on preparation for some later life or level of schooling” (p. 18). In this way, learning is more important than just preparing for the future and that learning needs to be meaningful in the now (Pate et al., 1997).

If curriculum planning involves student input, students become a part of the democratic process, which promotes their experience through democracy (Beane, 1997; Pate et al., 1997). Through democratic practices in the planning and implementation process, students are able to gain knowledge about themselves and the world around them. This leads educators and students to be in constant reflection about the process and the results and may allow for connections between new experiences and knowledge to existing knowledge, further deepening relevance. According to Fogarty (2009), with educators as the learning facilitators and students as the drivers of their education, democratic classrooms can be supported and enhanced. Ideally, a democratic school that included curriculum integration would serve as a model for how students can lead a democratic life. Beane’s (1997) ideas of curriculum integration allows students to work toward solutions to real life issues, which requires in-depth thought and dedication

Dewey’s promotion of democracy in education has influenced many theorists, researchers, and educators. Dewey (1938) focused heavily on student experience and allowing those experiences to guide the curriculum. Dewey’s thoughts lead to the suggestion for an educational system that integrates curriculum. Because integrated curriculum has a central focus that permeates and guides all learning, Beane’s (1997) work allows for application and implementation of Dewey’s thoughts on democracy in education.

Furthermore, Beane's work with curriculum integration is based on his belief that education should prepare students to contribute to a democratic society.

### Connection to Environmental Service-Learning

Through an integrated curriculum with a focus on environmental teachings and action, students can gain experience with democratic decision-making and in working toward solutions to problems in the environment (Hungerford & Volk, 1990). A democratic education prepares students to make decisions that affect their role in society (Apple & Beane, 2007; Dewey, 1938; Kaplan, 1997). Service-learning allows students to learn the curriculum through community service (Cress, Collier & Reitenauer, 2005; Kaye, 2010; Terry, 2003; Watkins & Braun, 2005). An integrated curriculum rich in environmental service-learning may be the vehicle to incorporate democratic practices. Therefore, the proposed research used environmental service-learning as a possible means to enhance middle-school students' democratic practices and to provide students with better preparation for participation in a democratic society.

### Definition of Terms

The terms defined below are significant to the understanding of the study.

Curriculum Integration or Integrated Curriculum: a coherently-designed curriculum that 1) connects and links the disciplines; 2) involves integration of experiences, social integration, the integration of knowledge; 3) relates school to real-life situations and issues; 4) is relevant and personally meaningful to students; and 5) attempts to provide deeper meaning and

understanding of the curriculum (Beane, 1997; Drake, 2007; Fogarty, 2009; Hayes-Jacobs, 1989, Pate, et al., 1997).

Civic Engagement: “educational experiences that intentionally prepare students for informed, engaged participation in civic and democratic life by providing opportunities to develop civic knowledge, skills, and dispositions through learning and practice” (U.S. Department of Education, 2012).

Democratic Education: education that connects students to the world around them and empowers them to make decisions that affect their place in society and is achieved through interconnected tasks that teach about democracy, through democracy, and for democracy (Edelstein, 2011; Kaplan, 1997).

Democratic Practices: practices that include engaging students in experiences that are relevant to students’ lives by utilizing students as the planners and decision makers concerning the curriculum and by affording the opportunity for students to make a connection to their community (Bennis, 2013).

Environmental Education: a learning process that increases people’s knowledge and awareness about the environment and associated challenges; develops the necessary skills and expertise to address these challenges; and fosters attitudes, motivations, and commitments to make informed decisions and take responsible action (National Environmental Education Advisory Council, 2005).

Service-learning: the philosophy and practice of teaching the curricular content through community service (Cress et al., 2005; Kaye, 2010; Kendall & Associates, 1990; Watkins & Braun, 2005) in which the goal is to educate students about how to serve others (Permaul, 2009).

### Significance of the Study

The findings of this study contribute to the literature on service-learning, environmental education, and democratic education and illustrate environmental service-learning projects and their inclusion of democratic practices. Middle school educators may reflect on their current teaching of service-learning and environmental education and use democratic practices as a means to make their curriculum more democratic and to encourage the development of democratic values necessary for students to function as successful members of a democratic society (Kaye, 2010; Korfmacher, 1999; Watkins & Braun, 2005). Educators may gain insight into how to utilize environmental service-learning projects to implement democratic practices in the classroom.

### Methodology

The methodology used in this study was a mixed-method approach. To understand the research problem more completely, the qualitative and quantitative data were collected sequentially (Creswell, 2003). Thus, the methodological tools were complementary and addressed the complex social context (Teddlie & Tashakkori, 2009) that studying democracy in education involves. This approach was appropriate for this study because it provided rich detail from the focus group and interviews and more generalized findings through the quantitative survey.

The quantitative data were collected from a pre-survey and post-survey, which were given to a group of 150 seventh-grade students. These surveys gave insight into the views of the student participants in relation to democratic practices and their experience with an

environmental service-learning project. To gather qualitative data, a focus group was conducted with six seventh-grade students. This deepened the scope of the data by allowing analysis of how group interactions and differences in opinion played a role due to the group dynamic (Krueger, 1988; Mertens, 2010). Participants in the focus group were randomly selected from those students who volunteered to be involved. The focus group met once before the environmental service-learning project and once after the environmental service-learning project. Focus groups were an appropriate tool for examining the attitudes of middle-school students' experiences with an environmental service-learning project because middle-school students often seek solace in the company of their peers and this method allowed seeing the group interactions and deepened the meaning of the data (Krueger, 1988; Mertens, 2010).

Additionally, individual interviews were conducted with six seventh-grade students before their environmental service-learning experience and then after their environmental service-learning experience. These student participants were determined through the responses to the quantitative survey and criterion-based sampling. Interviews provided rich detail about the participants' thoughts and feelings (Mertens, 2010; Seidman, 2006) about democratic practices, personal benefits, and community benefits of environmental service-learning projects.

The data from the quantitative survey were analyzed using descriptive statistics and matched pair t-test using SPSS to gain an overview of the students' experience (Gravetter & Wallnau, 2008; Mertens, 2010). The data also allowed comparison of the students' perceptions of the inclusion of democratic practices both before and after the environmental service-learning experience. The quantitative analysis determined the students' perceptions



about the democratic practices of students planning relevant curriculum and civic action.

The data collected from both the individual interviews and the focus groups were analyzed through open coding for emergent themes using NVivo10 and Saldana's (2009) coding manual. Each theme was then be categorized according to the research question it addressed. This provided opportunities to speak to students' perspectives related to the inclusion of democratic practices in their education as well as the possible personal benefit and community benefit of student involvement in environmental service-learning projects.

### Delimitations and Limitations

The researcher surveyed 150 students on one team at one suburban middle school to provide information about particular components of democratic education. The aspects of democratic education the researcher studied were the democratic practices of students as planners of relevant curriculum and civic engagement. The researcher chose to delimit the democratic practices by selecting two democratic practices to focus on in order to gain in-depth insight of a particular group of students with specific criteria.

By analyzing data from only one particular school, the researcher limited the study. Because the school is one in which the researcher works, this also limited the study due to the relationships the researcher had with its participants. However, this could have also served to deepen the meaning and provided more detail regarding the students' experiences.

Although the study involved 150 students, the individual interviews, which were part of the mixed-method study, were limited to six students, three girls and three boys. This limitation allowed the researcher to manage her time and qualitative data in a more effective manner. The small interview size also allowed for more in-depth data due to using Seidman's

(2006) three-interview approach. However, this small sample size can also be viewed as a limitation of the study.

Students were self-reporting in their interviews and surveys, which could have led to decreased credibility because students may have altered what they recorded or said. In attempt to combat this limitation, the researcher triangulated the data with a survey, focus groups, interviews, and journal collection.

Lastly, the nature of The Garden Project provided a delimitation because students were limited to doing something with the school garden. This project did not allow students to raise questions about any environmental concern that faced the community, which does not necessarily fit Beane's (1997) conceptual ideas behind an integrated curriculum. This aspect of the project was delimited to make the project more manageable because it set definitive boundaries for resources, time, and topics.

### Organization of Study

This study is organized into five chapters. The first chapter provides the rationale for the study, the problem and purpose statements, the research questions and an introduction to the conceptual framework and methodology. The second chapter focuses on a review of literature that covers service-learning and environmental education. Chapter 2 also contains a detailed conceptual framework concentrating on how democratic schools with an emphasis on curriculum integration set the foundation for a democratic education in middle-school students. The employed methodology with sampling, instrumentation and data analysis techniques comprise the third chapter. The fourth chapter includes an analysis of the

interviews, focus groups, and observations. The final chapter provides a discussion and analysis of the findings, conclusions, and implications for future research.

## CHAPTER 2

### REVIEW OF LITERATURE

#### Introduction

Many educators agree that without strong democratic values, citizens may struggle to be successful members of a democratic society. Educators may also agree that a goal is to incorporate democratic practices that may foster and strengthen students' democratic values. However, implementing democratic practices in the classroom can be challenging due to time constraints and lack of teacher education as to how to successfully incorporate these practices. If students are to learn democratic values, they must practice them, and in order to practice them, they need to be engaged in curricula that utilize the backbones of a democratic education. In this way, democratic practices can encourage a democratic education that extends to better acquisition of democratic values in students.

Dewey (1916a) expressed disappointment in the educational system of his time because it was not leading to a society of citizens who were more actively involved in democracy, held to a high moral standard, or showed compassion for others. Therefore, Dewey believed that teaching democratically was a responsibility that the educational system should embrace. Dewey (1946) believed that if educators could create students who had experience in democratic practices, this would lead to a "Great Community" and hopefully translate into a "Great Society" (pp. 126-127). Therefore, if the educational system focused

on teaching democratically, students would be better citizens in their community and ultimately in the whole of society.

While some school districts have engaged students in learning about democracy, many middle-school educators struggle to employ the necessary teaching methods or practices in the classroom to make sure that democratic values for students are addressed, supported, and extended (Hou, 2009; Korfmacher, 1999). Unfortunately, there are not always easy ways to address democracy in the curriculum, which leads to unsuccessful implementation of democratic education (Keen & Baldwin, 2004). Although an educational system may promote democracy in the classroom, the methods that educators need to employ are often unclear. The key to educating for democratic values is to implement democratic practices, such as allowing students to help plan relevant curriculum and allowing students to experience civic engagement, which are foundational components of a democratic education. Service-learning allows students to work toward solutions to problems within their community in a democratic fashion; therefore, it is a vital means to teaching for democracy (Kaplan, 1997).

Service-learning is the practice of teaching the curricular content through community service (Cress et al., 2005; Kaye, 2010; Watkins & Braun, 2005). However, it is vital to note that service is not just a process or methodology, but it is an encompassing philosophy (Kendall, 1990). As Permaul (2009) stated, “service-learning is more than a process of teaching and learning (serving to learn), but also is a source of learning from serving (learning to serve)” (p. 2). Therefore, the ultimate goal of service-learning is to educate students about how to serve others.

Similar to service-learning's main objective, environmental education aims to involve students in discovering solutions to environmental issues and then in actively participating at the local, national and international level to set those solutions in motion (UNESCO, 1977). Environmental education sets out to serve everyone by addressing the environmental issues that affect a global society. Environmental service-learning develops and supports students who see the importance of others and want to give back, which is beneficial to the community and wider world (Keen & Baldwin, 2004; Korfmacher, 1999).

There is research that suggests students, educators, and community partnerships receive greater benefits from service-learning experiences when educators apply what they have learned through pre-service teacher education programs (Hart & King, 2007; Kelley, Hart & King, 2007). Research has also been conducted on how to best instruct students in environmental service-learning (Korfmacher, 1999; Leege & Cawthorn, 2008; O'Meara & Niehaus, 2009; Schneller, 2008). Additionally, there is research on how teacher education programs prepare teachers to foster democratic practices through service-learning (Bell, Horn, & Roxas, 2007; Lambright & Lu, 2009; Wasserman, 2009). However, there is limited research on existing teacher education that successfully implements *environmental* service-learning projects and programs. Furthermore, past research does not address the methodology within environmental service-learning that is necessary to address democratic practices. This literature review addresses existing research on the value of teaching for democracy and how instructors can utilize democratic practices to best incorporate a democratic education through environmental service-learning projects.

## Conceptual Framework

This study explores how students' perceptions of their involvement in planning relevant curriculum and practicing civic engagement are affected by participation in an environmental service-learning project. Allowing students to act as curriculum planners of relevant curriculum and practicing civic engagement are democratic practices within a democratic education. This study uses a conceptual framework based in the many works on democracy and education of Dewey (1916a; 1916b; 1938; 1946; 1976a; 1976b) and Beane (1990; 1997; 2005). It also includes the research on how democratic schools can be utilized to successfully implement a democratic education that strengthens students' democratic values and democratic practices (Apple & Beane, 2007; Kahne & Westheimer, 2003; 2004). Furthermore, the framework draws from theories about how to best implement an integrated curriculum to foster a democratic education (Beane, 1997; Drake, 2007; Fogarty, 2009; Hayes-Jacobs, 1989; Pate et al., 1997).

The conceptual framework focuses on a common goal of democratic education and curriculum integration, which is to utilize an encompassing, coherent, and relevant curriculum that fosters students' ability to learn through democratic means. Therefore, one of the goals of both can be seen as engaging students in democratic practices to foster democratic values and to create students who can successfully function in a democratic society. Democratic education and curriculum integration are discussed further in the following sections.

Dewey (1976a) stated, "democracy is a way of life" (p. 227) and that democracy is not about the end results but about the means by which the ends are to be realized (Dewey, 1976b). Democracy is not something that once put into motion stays in motion; like a garden,

democracy needs constant upkeep to flourish. The same is true of a democratic education.

Education needs to represent the values that society hopes to establish and perpetuate (Dewey, 1976a). Dewey suggested that to allow students to live democratically, teachers need to focus on educating students for the present, guiding students in their application of knowledge, and providing opportunities for growth in further experiences (Dewey, 1916b; 1938).

### Democracy in Education

Defining democracy is not easy because it involves particular ideologies and principles that are plagued by ambiguity, mainly due to their misuse in political situations (Apple & Beane, 2007). It is no wonder, then, that most US citizens think of democracy in a political light. However, as Dewey (1916a) stated, “democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience” (p. 99). Therefore, as Dewey (1938) explained, democracy is about people gathering freely to converse and discuss those things that lead to more humane and shared experiences. In the classroom, this might involve students openly discussing curricular topics as opposed to listening to a lecture about the curricular topic from their teacher.

Having Dewey’s “democratic faith” is the belief that democracy is unassailable and necessary to the maintenance of human liberty and worth in our social relations (Apple & Beane, 2007). This faith develops from a common human nature and in the power that people have as a collective and collaborative group to use intelligence and social justice to arrive at decisions (Dewey, 1938). Hence, democracy is best defined by how it can be achieved, through open communication and exchange with others, to help the common good. Similar to the way democracy is best learned through the means, democratic values are best gained



through democratic practices. To include these democratic practices, educators may include allowing students to help plan and guide the curriculum and participate in activities that have students actively engaged within their local community.

In *Democracy and Education*, Dewey (1916a) suggested that society needs to have an educational system that provides students with control over their learning, an interest in social relationships, and the focus of social change without creating disorder. Due to constraints in curriculum planning and requirements with standardized testing, educators may often find it difficult to achieve this ideal. Even with these challenges, educators should not refrain from trying to achieve the democratic ideal in education because that would be to give up on the foundation of a democratic society. The idea of democracy in education is an ideal that seems to transcend the time of Dewey's ideas and those of his modern-day contemporaries who are still arguing for education that supports and enhances democracy (Apple & Beane, 2007; Beane, 1990; Edelstein, 2011; Kaplan, 1997).

Beane (1990) explained that although school is not entirely responsible for teaching a democratic way of life, it plays a large role for four reasons. First, public schools are a component of a democratic society; therefore, it is a responsibility of the public school system to make sure that it mirrors the democratic society we are preparing students to be a part of. Second, public schools have been proponents of collective learning through democratic practices, which shows how public schools are already naturally accomplishing the task of equal exchange, collaboration, and cooperation that are so important in democracy. Third, attending public schools is a common ground because the majority of people go through them and they, therefore, can provide the opportunity for practice and promotion of democratic living. Finally, full democratic participation is allowed in public schools because of the

smaller setting, and public schools are generally locally governed, leading to all voices being considered. These four reasons show why public education is a natural home for democratic practices that lead to a democratic way of life.

### Curriculum Integration

As Wraga (1996, 1997) explained, the idea of integration in the classroom has been around for quite some time. Curriculum integration began in the early 1800s with the idea of integration of studies. It then evolved into experience curriculum, which explored cooperative work among teachers and students to center education around current issues. In the early 1900s, the core curriculum was introduced and centered on personal and social issues (Wraga). Dewey's (1938) ideas of experience and education, which became experiential learning, explained that the majority of knowledge should be gained through real-life experiences and should be socially constructed and based on real-life experiences.

The eight-year study (Aikin, 1930-1942) was built on a realization that the classroom was dominated by teachers, leaving very little room for student input as to what they were doing or how they were doing it (Aikin, 1942). This type of education did not allow teachers and students to work together on problems that meant something to students because of genuine significance to their lives and this practice led to a lessening of students' eagerness to learn. By allowing educators from thirty progressive schools to experiment with their curriculum, results helped develop more sophisticated forms of student assessment, a better understanding of students' study techniques, methods for improving teacher education, and innovative ways of looking at curriculum design and implementation. The eight-year study provided integral research into development of the progressive education movement in the

U.S. and into how curriculum could be developed in integrated ways to help students achieve academic success using less traditional methods.

Traditional curriculum is often planned at a disconnected, discipline-based level. Curriculum integration begins with students forming questions about their natural curiosities (Beane, 1997) and then progresses to the thematic level and works toward defining how each discipline can relate content and skills to an overall theme. Hayes-Jacob (1989) stressed the importance of consciously integrating curriculum through examination of a particular theme or problem. When thinking about a curriculum relevant to students' lives, teachers also need to listen to student input in selection of themes to study (Pate et al., 1997). The goal is always to focus on the theme and not on the individual discipline fields, which defines a curriculum as integrated rather than multidisciplinary (Beane, 1997).

Curriculum integration has many different definitions, but all attempt to bring together multiple content areas, skills, or teaching methods. An integrated curriculum connects subject areas in some way (Drake, 2007), which leads to more meaningful learning and a richer understanding of the world (Fogarty, 2009). Hayes-Jacobs (1989) suggested that curriculum integration looks for linkages in the ideas, which is similar to Beane's (1997) thoughts of a design that attempt to connect ideas in every way through integration of design, experiences, knowledge, and social aspects.

Although Fogarty (2009) suggested that starting from the thematic level may not allow connections to be made from commonalities from the disciplines, she did note that reflective thematic tactics allow for a higher level of learning. Thus, by working from the thematic level first, educators are able to make curriculum current and relevant to students' lives. For example, many middle school students are interested in learning about themselves, including

where they came from and how to make decisions to foster the type of person they would like to be. Through a theme-based integrated curriculum, students can utilize critical thinking, problem solving skills, and responsible decision-making as well as become the active citizens that reflect current and relevant curriculum. Service-learning is a method to practice these skills and behaviors.

Environmental service-learning can encourage students to make critical decisions concerning environmental issues that affect their community. Grounded in the pedagogy of experiential learning, environmental service-learning allows students to develop and utilize democratic practices so they are prepared to become active members of a democratic society. To foster success in service-learning and environmental education, educators need to be prepared to teach democratically through a relevant curriculum students have helped design and that focuses on civic engagement. “If we want children to *learn* democracy, then we must develop approaches to schooling that encourage children to *live* democracy” (Kaplan, 1997, p. 433). Thus, if students are able to develop relationships in their local community and to help solve environmental problems, their education must encourage and guide them to live democratically.

### Democratic Practices

Democratic schools are successful at educating students through shared interests coupled with democratic participation and interaction (Apple & Beane, 2007). However, Apple and Beane caution that just as democracy does not happen by chance, neither does a democratic school. They contend that teachers need to explicitly include opportunities for democratic practice in order to awaken democracy. Democratic pedagogy includes various

practices that educators can utilize to strengthen students' democratic dispositions (Beane, 2005). Examples of democratic dispositions are participation in the decision making by all individuals involved as well as collaboration on the interests, concerns, and goals for all those involved and having faith in being able to solve problems for all those involved. Thinking about all those involved seeks what is best for the common good, which is at the heart of democracy.

Edelstein (2011) noted that learning democracy is not about having a defined conclusion reached through a task, but rather about having interconnected tasks that teach about democracy, through democracy, and for democracy. This means that to educate students about democracy, students must be exposed to an encompassing curriculum focused on democratic practices, allowing for an education that connects students to the world around them and empowers them to make decisions that affect their place in society (Kaplan, 1997). Teaching for democracy, therefore, allows students to experience relevant situations that promote social justice and civic responsibility. To accomplish this, educators must educate students for the present by making curriculum relevant to students' lives, must put the involve students in the planning of the curriculum, and must allow students to practice being civically responsible through everyday schooling.

### Students Planning Curriculum

Education too often perpetuates the idea that learning should be about acquisition of facts without consideration of contextual relevancy (Peters & Stearns, 2003). Therefore, students are unable to understand the importance of the material; they simply memorize the facts, listen without any true interest, and soon forget everything that was taught (Lewis,

1995). Although Dewey (1938) understood that what happened in the past was vital, he saw it as a means of understanding the present and not merely valuable in isolation. Thus, it is the role of educators to utilize past events to prepare them for present experiences. An education rooted in relevancy that poses problems relevant to students' lives is central to a democratic education and a democratic society (Dewey, 1916a; Giroux, 1997; Noddings, 2005).

Furthermore, Dewey (1938) was concerned that the educational system tended to focus on preparation for a future that is unpredictable. Because we cannot accurately predict the necessities of the future, to educate merely on possibilities is not utilizing present and realistic realities. Additionally, students experiencing democracy through their education lets them focus on their current lives, and not simply on preparation for future life (Beane, 1997; Pate et al., 1997), where they can be socially responsible citizens (Drake, 2005) who contribute to a democratic society.

Dewey (1938) expressed that experiential learning was often unsuccessful because educators treated these learning experiences as isolated experiences that have no application in future educational experiences. Students are then unable to use what they have learned through these experiential learning experiences when needed, which leads to missed learning opportunities. Dewey stressed the importance of future learning experiences and the connection to what they have learned in the past through experiential learning. It is this connection between past learning and future learning that fosters learner reflection and more significant learning experiences.

Putting the learner at command in developing the purposes of the learning activities and experiences is of utmost importance (Dewey, 1938). This allows the educator to guide

students through their experience, while keeping the students as democratic participants, and opens the door for further expansion in later experiences because students are free to experience new ways of observing, thinking, and decision-making. Dewey suggested that present experience is valuable, but that “every experience lives on in further experiences” (p. 27).

The curriculum must include shared participation by teachers and students to support equality (MacBeth, 2008). As Beane (1997) stated, “The participation of young people in curriculum planning follows from the democratic concept of participatory, collaborative governance and decision making” (p. 6). Practicing democracy, in this way, is more important than just learning about it. When student input is not considered, there may be a lack of student involvement. Students show greater engagement when they have had a hand in the planning of their curriculum. Using the students as curriculum planners allows them to set the themes of study through their interests. Beane explained this as being the pinnacle for integrative learning because it examines how students might view issues. Additionally, this organizes the curriculum and allows for inclusion of the experiences they believe can help them learn what is not only desired, but is necessary.

Morris’s (2011) study examined how the empowerment of students in what they learn and how they learn influenced their attitudes toward learning, academic achievement, and classroom behavior. Teacher and student shared responsibilities in classroom learning and management created an authentic democratic experience in a high school classroom. Students’ attitudes toward learning improved when they were able to share control of the classroom by being given choices concerning how they were going to meet learning objectives. Morris’s findings showed that students making decisions democratically in the

classroom led students to feel their viewpoints were more valued. The findings also revealed that students learned the curricular content better than when there were not opportunities for shared decision-making, suggesting that allowing students to democratically participate in classroom decisions leads to a stronger democratic education.

Peters and Stearns (2003) analyzed the effects of allowing student choice within Wagner College's learning community to develop solutions to local environmental concerns. Students responded that their participation was beneficial to them and the community and that they gained a higher level of civic engagement. Similar results were seen in students experiencing the program in two different academic years.

Peters and Stearns's (2003) results demonstrated that through student choice, students may become more involved in community experiences and more interested in solving community problems. This research suggests that through active learning experiences, students have the opportunity to envision a more just and humane world and then work actively to achieve it (Cipolle, 2004). Witnessing social injustice in their community, and working to address these injustices, can connect students to the curriculum (Peters & Stearns) because students can better connect to those things that occur within their own community as opposed to events that occur outside their community. Therefore, it is necessary for educators to help students locate and utilize their voices to communicate their own messages (Edwards, Gandini, & Forman, 1993). In this way, students can see relevancy in what they are learning, which may promote even deeper understanding.

To make curriculum relevant, educators must allow students to question the world around them and attempt to come up with possible answers or solutions to the problems they face as individuals and the problems that affect their local community (Beane, 1997; National



Middle-School Association, 2003). By including students as part of the democratic decision-making process in the school environment (e.g., co-designing the curriculum), educators can reinforce the importance of democratic action.

Through inquiry and questioning, students are able to take natural curiosities and try to make meaning of them. Pate et al. (1997) formed eight long-term goals for curriculum integration. They began their curriculum planning with their students by choosing themes relevant to the students' lives. Their goals centered on deeper understanding of the content, which allowed learners to gain a rich knowledge of specific topics, the purpose of enduring understanding. Enduring understanding affirms that a coherent curriculum must connect teachers and students, allow for student input, and relate the learning to their lives (Wiggins & McTighe, 2005).

The findings of Obenchain's (1997) study suggests that when classrooms embed democratic elements such as shared responsibility and decision-making, student choice, and opportunities for civic engagement, students demonstrate more civic responsibility. Obenchain implied that for democratic classrooms to be realized, teachers must provide students with democratic responsibilities that include opportunities to participate in classroom planning. Therefore, to achieve a democratic classroom, the democratic practice of allowing student input with curricular planning is necessary.

To gain students' interest, curriculum and experiences need to include student input into the creation of what is being learned and how it is being learned (Beane, 1997; Jacoby, 1996; Sunal & Haas, 2002). By allowing students to be a part of the democratic decision-making process in the school environment, educators can reinforce the importance of democratic action. Using students as curriculum designers through employing their own

questions allows them to feel ownership over their learning, which leads to a higher level of student motivation because the curriculum is relevant to them (Drake, 2005; Hayes-Jacobs, 1989).

### Civic Engagement

Another facet of teaching for democracy is to promote students' civic responsibility and engagement. This means that if students are able to participate in activities centered around issues facing their local community, they will be practicing civic engagement and demonstrating what it means to work toward a common good. Becoming an active participant in community issues with a focus on the common good is defined as civic responsibility (Dresner & Blatner, 2006). Therefore, in a democratic education, students are responsible for taking a problem in their community and finding a workable and successful solution (Kaplan, 1997). For example, as Bonnett (1999) suggested, it is important to encourage students to exercise their own critical thinking skills and to rationally decide for themselves what actions need to be taken. The development of civic-centered ideals comes when political and societal issues are connected to students' academic knowledge and their experiences (Cress et al., 2005).

The best learning is a result of experiential and student-driven activities that promote cooperation, trust, and support (Cipolle, 2004). Hargraves (2001) noted that the educational system does not prepare students to take active roles in citizenship, to evaluate their engagement in their community, or to understand how knowledge guides their engagement. Honoring Dewey's (1916a, 1938) ideas on democracy in education allows students to

experience action, work toward results, and find success through responding to community needs. In this way, students can use their knowledge to engage in action.

Lee, Olszewski-Kubilius, Donahue, and Weimholt (2007) addressed the effects of service-learning on the development of civic responsibility. The study involved gifted high school students who reported a higher awareness of issues within their communities and a greater sense of responsibility in working toward solutions to those issues after their participation in a service-learning program. The findings indicated that students had a greater awareness of civic issues and were able to develop a stronger connection and commitment to their local community due to their experience with service-learning, thus developing greater civic responsibility. Lee et al.'s research is an example of how educators focusing their curriculum on social and political issues in their community through service-learning can lead to higher civic responsibility in students.

It is important to examine research that attests to students' interest in future civic engagement because one of the goals of teaching for civic responsibility is to promote future experiences within local or societal communities (Dewey, 1938). Dresner and Blatner (2006) looked at how implementation of environmentally-situated controversies equipped students with the necessary knowledge and action skills to become active citizens regarding environmental concerns. The goal was to enable students to then go out into the community to make changes; the results of this study indicate the high interest level students have in future civic engagement. Thus, through environmental service-learning, students may gain experience in being civically active.

Having students immerse themselves in community issues allows them to develop an understanding of others, which may lead to replacing prejudice and stereotypes with

understanding and a pursuit of tolerance and fairness toward others (Kaye, 2010; Langston, 1990). Having an understanding and respect for others leads to a stronger democratic ideal.

Democratic involvement is seen through an increase in civic responsibility and active citizenship because students are able to apply their knowledge through more dynamic means rather than simply learning concepts in their various courses (Watkins & Braun, 2005).

Giroux (1992) agreed with Dewey's thoughts of education serving society instead of society serving education. Furthermore, Giroux challenged educators to help students be able to take a stand against forms of oppression, social injustice, and immoral political action. Therefore, he believed that students needed to find ways to get involved in their community and fight for democracy. To involve students in working toward democratic means, the curriculum must purposefully embed opportunities to act with social justice in mind (Westheimer & Kahne, 2004).

Westheimer and Kahne (2004) analyzed educational programs that promote democracy. Students displayed a strong personal responsibility for helping others, a commitment to community involvement, and a desire to work for social justice. Westheimer and Kahne suggest that for students to develop democratic values, they must be explicit in the design and implementation of a program and not just an assumed guarantee. If the democratic values are left unclear, students may not develop the intended democratic values. This suggests that for democratic values to be addressed, it is key that the processes or practices are democratic in nature as a result of careful and purposeful planning. It is necessary to implement democratic practices in the classroom to highlight democratic values.

Locke's (2009) focus on environmental education in Costa Rica also demonstrated the importance of purposefully planned curriculum when democratic practices are the goal.

Locke's research focused on the environmental education program of a small village and showed the necessity for promoting social justice through the communication of dedicated instructors. This research indicates that careful planning is necessary to maximize students' acquisition of civic responsibility. Edelstein (2011) explained that by working on solutions to social problems, students are able to take responsibility for the welfare of others in the community and work toward a common good. Therefore, through instructional methods, students are able to gain experience with civic responsibility and engagement and work for social justice.

### Service-Learning and Environmental Education

Because service-learning can be an encompassing theme of an integrated curriculum based on working toward solutions to community concerns, foundational theories on service-learning should be reviewed (Cress et al., 2005; Kaye, 2010; Watkins & Braun, 2005). The work of the United Nations Environmental, Scientific, and Cultural Organization (UNESCO, 1977) and how it has shaped environmental education and its ability to develop environmental stewardship and responsibility in students will be discussed (Chawla & Cushing, 2007; Jensen & Schnack, 1997; Hungerford & Volk, 1990). Lastly, existing research on environmental service-learning implementation identifies the key role instructors have in maximizing student benefits (Korfmacher, 1999; Lege & Cawthorn, 2008; Hou, 2009; Schneller, 2008; Tryon, Stoecker, Martin, Seblonka, Hilgendorf, & Nellis, 2008).

### Service-Learning

As Permaul (2009) suggested, service-learning is not just teaching in which students serve the community to learn, but it is also a source of students learning to serve from the process. Therefore, the ultimate goal of service-learning is to educate students about how to serve others. The component of contributing to the common good through serving others is a part of the democratic practice of civic responsibility.

Service-learning is the practice of teaching the curricular content through community service (Cress et al., 2005; Kaye, 2010; Terry, 2003; Watkins & Braun, 2005). Service learning is a philosophy of education that cultivates democracy by allowing students to work collaboratively and to contribute to the community (Cress et al., 2005; Langston, 1990; Sunal & Haas, 2002; Watkins & Braun, 2005). This encompassing philosophy is an educational mindset that all classroom methods and practices must adopt in order for service-learning to be successful. This suggests that service-learning needs to permeate students' education and not be a fleeting idea, task, unit, or method; service-learning should be an inclusive set of beliefs and attitudes that promote service as the fundamental means of a democratic education. Therefore, students must be involved in democratic practices that encompass the goals of a democratic education throughout their learning. Educators can give students opportunities to engage in these practices by allowing students more control in the decision-making regarding their learning.

Many theorists suggest service-learning benefits students, educators, and the community. Students involved in service-learning have shown a greater involvement in their education (Kaye 2010; Keen & Baldwin, 2004; Watkins & Braun, 2005) and better

cooperation with peers (Sunal & Haas, 2002) because they are actively and cooperatively involved in the planning and implementing of the community project(s). Through this collaborative process, students also strengthen their problem solving skills as they are working toward possible solutions to real-world issues (Hou, 2009; Korfmacher, 1999; Sunal & Haas, 2002). By analyzing real-world issues, students also gain more experience and success in their communities (Kaye, 2010; Korfmacher, 1999; Watkins & Braun, 2005). When students are working in their community, they are able to gain greater awareness of biases, prejudices, and stereotypes (Watkins & Braun) and have more civic responsibility (Kaye, 2010; Keen & Baldwin, 2004; Korfmacher, 1999; Westheimer & Kahne, 1996). This may lead to personal and/or societal transformation (Cress et al., 2005; Hou, 2009; Keen & Baldwin, 2004; Senge, 1994).

Although there are benefits to service-learning, many of these are theory-driven rather than research-based. There are challenges to service-learning that must be considered. For instance, if students or teachers do not receive proper training on how to complete service-learning projects, successful implementation is a challenge (Korfmacher, 1999; Tryon et al., 2008). Another challenge is the failure to consider different learning styles, which then does not allow for the learning opportunities that service-learning intends to support (Honnet & Poulson, 1989; Hou, 2009). Also, there is a possibility that projects may end up being unimportant or develop relationships between the participants and the local community that are not meaningful (Hou; Tryon et al.). Finally, if there is not enough time for reflection on the part of both the teacher and the students, the benefits of service-learning may not be fully realized (Hou). Because many of these challenges impede instructional implementation, educators may avoid doing service-learning projects that are lasting and meaningful (Hou).

It is important to look at the challenges service-learning projects pose to determine if the benefits outweigh the challenges. Most challenges to successful implementation of service-learning projects revolve around issues with implementation of the project and reflection of the experience. If implementation concerns are addressed and ample reflection time is considered, service-learning's benefits can be maximized. Table 1 summarizes the benefits and challenges of service-learning.

Table 1  
Service-learning Benefits and Challenges

Benefits	Challenges
Student involvement in their education	Lack of proper educator training
Strengthened problem solving skills	Doesn't always consider different learning styles
Better cooperation with peers	Irrelevant relationships with the community
More experience and success in their community	Not enough reflection time
Greater awareness of biases, prejudices, and stereotypes	
Greater civic responsibility	
Possible personal and/or societal transformation	

Service-learning can be the method by which educators achieve a range of educational standards and goals and by which students receive effective instruction (Cipolle, 2004). As Clause and Ogden (1999) stated, "Service-learning has an extraordinary potential to engage young people in experiences involving explorations of community and self, critical thinking, democratic activities, and the pursuit of a more just and humane world" (p. 70). A service-learning project rooted in environmental education may allow for recognition of the importance in working toward solutions to environmental concerns.



### Environmental Education

Environmental education is best defined through its goals. The Tbilisi Declaration explained that the ultimate goal of environmental education is to create people who are actively involved in working toward solutions to complex environmental concerns (UNESCO, 1977). Chawla and Cushing (2007) stressed that to create active environmental stewards, education needs to purposefully embed opportunities “to gain knowledge, form positive attitudes about the environment, and practice action skills” (p. 437). Environmental education aims to involve students in discovering solutions to environmental issues and then in actively participating at the local, national and international levels to set those solutions in motion (UNESCO).

Jensen and Schnack (1997) distinguished that environmental behavior differs from environmental action in that action is intentional and undertaken with the motives of targeting the problem and coming up with viable solutions, whereas environmental behavior does not accompany intentional thought with the goal of remedying an environmental problem. An environmental behavior may be recycling, but the environmental action may lead students to look for solutions on how to increase recycling at school. The aim of environmental action is to develop students’ abilities to participate as active citizens in a democratic society (Emmons, 1997; Jensen & Schnack; McClaren & Hammond, 2005; Schusler, Krasny, Peters, & Decker, 2009). This view was supported by Hungerford and Volk’s (1990) earlier thoughts that simply imparting knowledge about the environment may not lead to active environmental

action. Hungerford and Volk also contend that educators need to pay close attention to the entry-level variables, ownership variables, and empowerment variables. Students' knowledge and demonstration of the variables demonstrate how environmental education can be used to promote active democratic participation.

Entry-level variables can also be called antecedents of action because they involve students' predispositions as far as having an interest in environmental concerns (Chawla & Cushing, 2007). Students acquire these through examples set by parents, teachers, and other mentors who show an interest in environmental activity. Educational programs in which students can gain knowledge about environmental issues and learn and practice action skills can lead to stronger entry-level variables, which is more likely to lead to environmental action (Meinhold & Malkus, 2005). Environmental knowledge is necessary to then move students into practicing environmental action, and it is the action component that is vital to continuing engagement with environmental concerns (Culen, 1994; Jordan, Hungerford, & Tomera, 1986).

Entry-level variables are necessary antecedents for students to understand how environmental issues affect them and the people and places that matter to them, which moves them to ownership variables (Chawla & Cushing, 2007). Ownership variables include personal connection to and investment in certain environmental issues (Hungerford & Volk, 1990). Empowerment variables include knowledge about appropriate environmental action strategies and give students the confidence that their environmental actions may be successful at tackling their environmental concerns. Therefore, through empowerment variables, students believe that they can have an effect on environmental issues and can actively work toward solutions to improve these issues.

Intentions to help, personal responsibility, and environmental sensitivity are often included in environmental education research because they are related to environmentally responsible behavior (Hungerford & Volk, 1990). Environmental education can connect students to their learning by putting them in command of making the curriculum relevant. Also because environmental education's main goal is to promote active environmental stewardship in students (UNESCO, 1977), utilizing environmental education can strengthen students' democratic practice of civic responsibility.

### Environmental Service-Learning

Environmental service-learning may foster the democratic practices that influence the democratic values educators should be working toward instilling in students. This research study sought to demonstrate the connection between environmental education and a democratic education through a focus on an integrated curriculum grounded in environmental service-learning. Environmental service-learning has the potential to highlight all of the benefits of any service-learning project.

Because service-learning is experiential in nature, students may strengthen their acceptance of diversity, gain a deeper understanding of the curricular material, and enhance future learning experiences through reflection on their service-learning experience (Butin, 2006). Previous research has suggested that when students participate in environmental service-learning, they gain experience with civic responsibility and strengthen their environmental knowledge and action. Existing research also indicates that although instructors in environmental service-learning projects play the role of facilitator rather than direct instructor, their role is of vital importance in fostering student gains (Mascolo, 2009).

By working on an environmental concern in their local community, students may gain experience with civic responsibility. Palmer's (2012) study examined how an environmental art service-learning project improved students' attitudes toward civic engagement. Covitt's (2006) study showed similar results in the area of improved civic responsibility when students were involved in an environmental service-learning program. Students' overall intentions to help with environmental issues in their community increased after participation in an environmental service-learning program.

Students working in their community may lead to a greater connection to their community, which may increase their desire to be more civically active. Students have reported feeling a greater connection to their community through their active engagement and believed they had the ability to create change after participation in an environmental service-learning project (Keen & Baldwin, 2004; Lege & Cawthorn, 2008). This suggests that when students are able to gain experience with civic responsibility, their intentions to help in the future increase.

Another possible benefit of participation in an environmental service-learning project is an increase in environmental knowledge and awareness. Participation in an environmental service-learning project or program has the potential to increase students' knowledge, attitudes, and sensitivity toward environmental concerns (Covitt, 2006; Palmer, 2012; Schneller, 2008), which may lead students to environmental ownership variables and empowerment variables and take students from environmental knowledge to environmental action (Hungerford & Volk, 1990). The potential of moving students to action is important because it is an indicator of civic action that is environmental in nature.

At the heart of these potential benefits is the role of the instructor. As O'Meara and Niehaus (2009) discovered, instructors must help students achieve curricular goals, show the relevance of theory in practice, and foster civic responsibility and action. To accomplish this, instructors need to be aware of their responsibilities in guiding students to environmental service-learning goals. If the instructors fail to do their part in the planning and implementation of an environmental service-learning project, then student gains may be diminished or nonexistent (Keen & Baldwin, 2004).

Suggestions for instructors to consider include cultivating a good working relationship between the instructors and community partners (Korfmacher, 1999; Leege & Cawthorn, 2008; Schneller, 2008). Furthermore, because many service-learning projects suffer from insufficient implementation time and do not honor the depth the projects require, instructors must pay close attention to the planning and guiding of the project (Korfmacher; Schneller; Tryon et al., 2008). Therefore, instructors also need to pay close attention to logistical conflicts concerning efficient use of time, effort, and resources (Hou, 2009; Korfmacher; Leege & Cawthorn). Finally, instructors must manage student progress throughout the project, including being an active presence as students are completing their collaborative work (Korfmacher; Leege & Cawthorn). It is of utmost importance that the instructor plays a vital role in an environmental service-learning project if student benefits are to be realized.

Environmental service-learning requires substantial work on the part of the instructor to guide students through the process of issue awareness, knowledge of the environment, attitudes or strong feelings of concern, skills toward solutions and participation to take appropriate action (UNESCO, 1977). Due to the involved process, it is important to focus on the instructor's role in implementation of environmental service-learning projects. Existing

research highlights the methods and practices that instructors must consider. Through consideration of democratic practices, such as students helping in the planning of environmental service-learning projects that are relevant to both them and their community, instructors may be able to overcome potential challenges to implementation and support the democratic experience that environmental service-learning has the potential of becoming.

### Conclusion

Edelstein (2011) stated that “learning democracy is not just an extension of the serious business of learning for life. It *is* the serious business of learning for life and, as such, it *must* be a central goal of education in school” (p. 127). Hatcher and Erasmus (2008) suggested that education’s main purpose is to develop the capacities of all students to become active contributors to their community. By utilizing an integrated curriculum rich in environmental service-learning, students may gain experience in helping plan the curriculum, see their education as relevant to their lives, and be involved in civic engagement within their community. These democratic practices may help strengthen students’ democratic values, leading them to become productive members of a democratic society.

Existing research supports the benefits of teaching for democracy and gains of environmental service-learning as well as understanding how instructors should implement environmental service-learning projects and programs. However, there is a gap in the research in how current teacher education programs support implementation of such projects and programs. Environmental service-learning projects provide concrete methods for implementing democratic practices by including students as planners of relevant curriculum and experience with civic responsibility. If educators utilize environmental service-learning

projects in addition to their curriculum, a democratic education may be realized and students' democratic values may be strengthened.

## CHAPTER 3

### METHODOLOGY

#### Introduction

The purpose of this study was to examine the experiences of middle-school students in an environmental service-learning project. In particular, this study assessed students' experience of democratic practices in an environmental service-learning project. The targeted democratic practices were students' involvement in planning relevant curriculum and practicing civic engagement. Lastly, this study on environmental service-learning intended to describe students' personal benefits as well as the community benefits as a result of student participation in an environmental service-learning project.

#### Research Questions

The following research questions guided this study:

1. Do middle school students show a difference in their perceptions of student involvement in curriculum planning and civic engagement following their participation in an environmental service-learning project?
2. How do middle school students describe their experiences in participating in an environmental service-learning project regarding student involvement in curriculum planning and civic engagement?



3. How do middle school students describe their personal benefits as a result of participating in an environmental service-learning project?
4. How do middle school students describe benefits to their local community as a result of the students' participation in an environmental service-learning project?

This chapter includes the description of research design, the participants, data gathering methods, and the data analysis techniques used in the study.

### Research Design

The research used a mixed-method approach because it led to more conclusive findings than purely quantitative or qualitative data collection methods (Mertens, 2010). In addition, this method allowed the researcher to generalize the findings as well as develop a more complex view (Creswell, 2003) of how the participants experienced democratic practices while participating in an environmental service-learning project.

The qualitative and quantitative data for this study were collected sequentially to better represent the research problem (Creswell, 2003). In this way, the qualitative and quantitative measures were complementary and addressed the complex social context (Teddlie & Tashakkori, 2009) that democratic practices entails. Data were collected in multiple ways and were analyzed throughout the research process for triangulation to relate the different forms of data and limit validity threats (Berg & Lune, 2011).

### Participants and Setting

The district and middle school were chosen due to availability of an environmental service-learning project. Participants for this study came from a school district in the

Midwest region that serves 5,192 students from pre-K through 8<sup>th</sup> grade (ISBE, 2012). This district includes two middle schools and seven elementary schools. The student profile within the district is 81.5% Caucasian, 7.0% Asian, 5.4% Hispanic, 0.8% African-American, and 0.1% each of Native Hawaiian/Pacific Islanders or American Indians.

The middle school the study participants attended had a population of 869 students, comprised of six teams of students (two at each grade level) in grades six, seven, and eight. At this school, the percent of students coming from low-income was 9.1%. The limited English proficiency was 2.1%. The Individualized Education Program (IEP) serviced 11.7% of the student population. The mobility rate was 2.2%. The attendance rate was 96.5%, and there was zero chronic truancy. The school had 95.0% of students meeting or exceeding standards on state tests. Looking at particular subject portions of the state testing, the seventh graders scored 95.1% for reading, 95.9% for math, and 92.2% for science (ISBE, 2012).

The participants were seventh grade students because the seventh grade curriculum was flexible enough to include an environmental service-learning project, which was not a part of the regular curriculum. The district's middle schools' science curriculum contained four units, each lasting a quarter of the year. However, the fourth unit was not incorporated into the 2013-2014 school year and, thus, left a quarter of the school year devoted to the teachers' discretion in curriculum and implementation. The research project comprised of the majority of the second quarter.

The study involved the seventh graders on a particular team at one of the middle schools. This team of students included approximately 150 students. Both the team assignments and each class assignment were determined randomly by computer selection.

However, some students were placed on particular teams due to parental requests or educational needs through special education.

The participants were selected using criterion sampling because it allowed the researcher to work with participants who fit a set of criteria instrumental to the study. The participants met the criterion that they were currently in seventh grade on one particular team. The participants also needed to participate in an environmental service-learning project through their science class. The science teacher on the other team was new to the position and needed extra time with the curriculum, so she had declined participation in the study.

The student participants for the focus group and interview were randomly selected from those who had given permission. This form of sampling was purposeful random sampling and allowed for participants within criterion sampling to be randomly selected and considered representative of the studied population (Mertens, 2010).

The study was proposed and approved by the superintendent of the district. The study was introduced to the students in their science class through a keynote presentation. After the presentation, students took home student and parent letters that contained the consent and assent forms. The letters asked the students to participate in the survey and to keep a journal. Among the volunteers who agreed to participate in the study, six students were randomly selected with an invitation to participate in focus groups, and another set of six students were randomly selected with an invitation to participate in interviews. There was also an agreement to be digitally audiotaped. All consent and assent forms were returned within one week. For confidentiality, pseudonyms were used when coding to ensure the privacy of the participants.

## The Researcher's Context

### Researcher's Perspective

My role as a teacher and leader in environmental education has developed quickly and intensely over my nine years of teaching seventh grade science. However, the seed of environmental interest was planted in me in 1997 when I was 19. One of my undergraduate majors was Environmental Science, and I have been passionate ever since my first class in the program, Environmental Ethics. The course lasted just four months, but its impact will last a lifetime. My professor was an amazing man who opened my eyes to the feelings I had concerning the environment and the misuse of it. I was able to determine my thoughts and feelings, which allowed me to put forth my own call to action. I then became an environmental activist on my college campus, speaking out against animal cruelty, misuse of natural resources, and an awareness of human action on the environment.

My interest in environmental concerns led me to an internship at an environmental testing laboratory that followed the EPA's standards for testing air, water, and soil quality. My work was fascinating enough that I went to full-time employment after graduating from college and remained employed there for seven years until I completed my Master's in Education.

I have come to realize that teaching about the environment in isolated activities is not effective in provoking students and moving them to action. Through my understanding of the work of Dewey and Beane, I have come to the conclusion that integrated curriculum in a democratic classroom is the best method for promoting change. The change I wish to promote is environmental in nature. Through democratic methods and experience in real-

world situations in a student's community, I believe that students can gain better understanding of what needs to be done and the means by which to do it. Service-learning projects allow students to experience democracy, and those service-learning experiences founded in environmental concern can lead to environmental democracy where change can be implemented.

Observing my students in an environmental service-learning project felt like an educational dream to me. It involved students I had come to know and appreciate and allowed them participation in something one of their educators was deeply passionate about. My goal was to insight passion in them, just as my professor did years ago with me in that Environmental Ethics course.

Mertens (2010) addressed the concerns about the researcher being involved in the situation being examined, and this was a legitimate concern. The student participants may have felt they had to respond in certain ways because I was the one assigning grades for their report cards. This position of power may not have allowed students to feel comfortable, thereby altering their responses or actions (Seidman, 2006). However, this also put me in a position of being able to collect very rich data because of the level of trust I had established with the students throughout the school year.

Because students had become comfortable with me, and I with them, I was hoping that this only served to enrich the experience and deepen the study. As Seidman (2006) explained, if the interviewer is explicit about the rights of the participant prior to interviewing and the researcher controls the distance to the participants when interviewing, an equitable relationship can be formed between the researcher and the participants. To further alleviate

this concern, I triangulated the data collection, which led to consistency and verification of my findings.

### Researcher's Philosophical Alignment

To understand the planning and implementation of the research study, it is important understand my philosophical views on curriculum integration, service-learning, and environmental education. The research study sought to look at a way to include democratic practices and to utilize all three philosophical contexts. Therefore, it is necessary to explain how I used my philosophical alignments to design and implement this research study.

### Curriculum Integration

The Garden Project aligned itself well to Beane's (1997) ideas behind curriculum integration through involving the integration of design, experiences, knowledge, and social aspects. The project's design was done to consider an integration of what the students were learning, how they were learning, and how to work cooperatively with others while they were experiencing something that was different from what they were accustomed. Although my views on curriculum integration most closely follow Beane (1990; 1997; 2005), I am afraid that The Garden Project did not do justice to all of these philosophical views. In the ideal curriculum integration research situation, I would have left the topic more open-ended, allowing students to form questions about their natural curiosities regarding environmental concerns they viewed as important in their local community. Boundaries as far as general topic and how they would participate in civic engagement were controlled in The Garden Project, which did not allow students to broaden their scope and experience.

### Service-learning

Prior to the research study, I knew very little about the specifics of service-learning, but knew I had an interest in looking at how students could learn through serving others. I now align myself philosophically with so many researchers (Kaye, 2010; Keen & Baldwin, 2004; Korfmacher, 1999; Permaul, 2009; Sunal & Haas, 2002; Watkins & Braun, 2005; Westheimer & Kahne, 1996) who have noted the many benefits of service-learning and have taken into account the challenges that must be overcome to make service-learning experiences meaningful to students. Kendall (1990) stressed the importance of acknowledging that service-learning is not about a set of lesson plans that teachers can implement in their classrooms, but rather that service-learning is an encompassing philosophy. This encompassing philosophy was what I hoped to bring to The Garden Project by making the focal point educating others about the school garden, making this permeate through every aspect of the experience.

### Environmental Education

My philosophical beliefs about environmental education align themselves closely to those of Hungerford and Volk (1990) and the goals of the UNESCO (1977) because I feel strongly that students cannot be merely taught about environmental issues, but they need to use this knowledge about environmental issues to take action within their community and society. The Garden Project aimed to engage students in their community through an environmentally-based concern, which included the benefits of locally-grown produce. I designed this project with the aim of bringing an awareness to the students concerning

peoples' lack of knowledge about the produce they are eating and to inspire empowerment in the students to take action as far as educating others. My hope was that this project would spark interest in the students to continue learning about this concern. I also hoped that this might lead them to feeling empowered enough to look at other issues within the community in the hopes of coming up with viable solutions.

### Project Description

Students involved in the environmental service-learning project participated in work with the school garden. Because one of the democratic practices studied was students planning curriculum, the guidelines given to students to complete the project were minimal. Students were given the topic of promoting the school garden to the rest of the local community. They were told that they had to research and learn about a topic concerning gardens and then had to share this knowledge with the local community during a symposium at the local library. This sharing allowed students to demonstrate the other democratic practice being studied, which was civic engagement. Civic engagement involves students addressing public issues either individually or cooperatively with others to improve their community or a larger society (NCSS, 2013).

The school garden was started in the spring of 2013 and has been maintained by various teachers and students involved in the school's Garden Club. There may have been a small number of students who participated in the study who had also participated in Garden Club activities. The garden was possible due to a grant provided by the city's green campaign, which looked to fund projects that were environmental. Although the garden had been developed as far as beds being made and summer vegetables and herbs planted, the



relation to the community component had not been discussed or addressed. An important component of environmental service-learning is connecting with the community; therefore, students were guided in their exploration of how they could make a connection between the school garden and the local community.

Service-learning allows students to learn curricular content through community service (Cress et al., 2005; Kaye, 2010; Kendall & Associates, 1990; Watkins & Braun, 2005); therefore, it was important for students to extend the benefits of the school garden to the local community. The school garden was becoming established in its potential for the school, but how the benefits extend to the community had not yet been either explored or extended. With this in mind, the environmental service-learning project sought to make meaningful connections with the community through ideas such as using the garden's harvest for a local farmers' market and donation to local food pantries.

### Data Collection

The data collection was completed in approximately 11 weeks. For the purposes of this mixed-method study, the data gathering methods included pre- and post-surveys, focus groups, individual interviews, and journals. Through triangulation of the data, the participants' experiences of democratic practices while participating in an environmental service-learning project were explored. The following data collection techniques allowed the researcher to gather information about each of the research questions in a variety of ways.

### Survey

Descriptive surveys are an effective means of gathering information about the characteristics of the participants at a particular moment in time (Mertens, 2010). The participants in this study completed an online survey that addressed their experience in democratic practices while participating in an environmental service-learning project through the GoogleDoc website. The survey was a combination of three different validated surveys used in previous studies (Appendix C). This survey was broken into two portions to represent the two democratic practices to be studied: civic participation and students planning relevant curriculum. The participants took the pre-survey two weeks prior to their environmental service-learning project and the post-survey within a week after their experience. This data collection strategy allowed for comparison of the students' experiences with the inclusion of democratic practices during an environmental service-learning project.

The first portion of the survey was the Civic Attitudes and Skills Questionnaire (CASQ) for Evaluation of Service-Learning Outcomes (Moely, Mercer, Ilustre, Miron, and McFarland, 2002). This survey contained 44 items broken into six parts that addressed civic participation. The second portion of the survey combined two surveys that addressed students planning relevant curriculum. The first section contained six items (Morris, 2011) and the second section contained 46 items broken into nine parts (Assor, Kaplan, & Roth, 2002). The only adaptation to these surveys was the Likert scale numbers. Although some of the survey materials were originally on a 4-point scale, all of the survey items were changed to a 5-point scale for better student understanding and consistency. The survey items' wording was not altered.

### Focus Group

Focus groups allow seeing group interactions and a difference of ideas due to group dynamic, which may help deepen the meaning of the data (Krueger, 1988; Mertens, 2010). In addition, focus groups often allow students to feel more comfortable because there is solace in numbers. In this study, focus groups allowed the researcher to see the progression of the students' experience. A total of two focus groups were conducted throughout the research process, one during the first week and the second in the eleventh week, which was within the week after conclusion of the project. The focus groups consisted of six seventh grade students, three girls and three boys. These six students were different from those whose journals were collected for analysis. Each focus group met during lunch for 30-40 minutes.

### Interviews

Interviews with the students allowed the researcher to gain information about their perspectives in a more personal and in-depth manner (Mertens, 2010; Seidman, 2006). As Seidman described, "stories are a way of knowing" (p. 7), and through interviews, the researcher can understand the participants' experiences and make meaning of those experiences. This study included interviews with six students, different from those who participated in the focus groups or journal collection, after they experienced an environmental service-learning project to encourage meaningful reflection by the participants in a more personal manner. The researcher audio-recorded each interview and took field notes during each interview.

### Journals

Collecting documents and/or records allows a researcher to gain insight into the research situation and daily functioning of a study (Mertens, 2010). This study utilized students' journals to record their reflections throughout the study. All students who agreed to participate in the study were asked to complete their journal weekly or as often as they felt necessary to describe their thoughts, feelings, and attitudes about their participation in the environmental service-learning project. The format of the journal was at the discretion of the student participants; however, a set of questions was suggested to guide students in their reflections (Appendix D).

### Data Analysis

#### Focus Groups, Interviews, and Journals

Multiple steps were used in coding the transcribed data from the focus groups, interviews, and journals. First, all audio-recordings were transcribed by the researcher. The researcher coded the audio-recordings to seek possible themes that emerged related to democratic values, personal benefit, and community benefits of environmental service-learning projects. The researcher also reviewed all field notes and reflected on how they related to the themes and research questions.

Second, NVivo 10 was used to color code the data for themes to see where intersecting data addressed the research questions. Using color coding, new themes emerged. The themes were then reevaluated to check if and how they related to the research questions.

Furthermore, Saldana's (2009) coding manual was also used to cross check the emergent themes.

Third, peer review of the coding and themes allowed for inter-rater reliability. The peer reviewer was a colleague who was pursuing a doctoral degree in the education field, was familiar with the interview process, and had experience working with middle-school students. This method of review led to stronger validity and reliability of the collected data (Creswell, 2003; Mertens, 2010; Seidman, 2006). Finally, each theme was coded to the corresponding research question it addressed.

### Survey

Data collected from the surveys were compiled on the researcher's GoogleDoc account. This website allowed for a level of data analysis because it compiled the data per response for each question. Therefore, it provided a basic foundation for deeper analysis of the quantitative data that were later analyzed through more sophisticated methods. This was necessary because quantitative data can be fragmented bits of participants' attitudes, thoughts, and feelings (Weiss, 1994).

The data collected through the pre- and post-surveys were analyzed using descriptive statistics using the analytical software SPSS. Basic descriptive statistics allowed the researcher to get an overview of the participants' experience of democratic practices in an environmental service-learning project. A matched pair t-test was used to draw clearer conclusions. The data were parametric because the researcher was comparing the pre- and post-survey results that used interval data.

## Conclusion

This chapter described the mixed-methods focus used in this study. The research questions, research design, sampling procedures, data collection techniques, and data analysis methods were included in this chapter. Findings and conclusions are addressed in the following two chapters.

## CHAPTER 4

### FINDINGS

#### Introduction

Quantitative and qualitative data were collected to determine middle school students' perceptions of including the democratic practices of their involvement in planning curriculum and participating in civic action in an environmental service-learning project. Students were involved with planning their project and with sharing what they learned with their community. Students' perceptions were compared before and after their experience with The Garden Project. A total of 137 students' pre- and post-surveys were analyzed.

Quantitative data were collected through three pre- and post-surveys addressing students' perceptions of utilizing students as curriculum planners and being able to participate in civic engagement. Descriptive statistics and a paired t-test analysis were performed on all three surveys. Qualitative data were collected through two focus group meetings consisting of six students, individual interviews with six students, and journal entry collection from 30 students. Focus group, interview, and journal data were analyzed through coding and common themes.

#### Research Question #1

The first research question addressed if middle school students showed a difference in their perceptions of student involvement in curriculum planning and civic engagement

following their participation in an environmental service-learning project. Students responded to three different surveys: two about their perceptions regarding involvement in planning curriculum and one about their perceptions regarding participation in civic engagement. Students rated their perceptions of the survey statements using a 5-point Likert scale, with 1 as strongly disagree, 2 as disagree, 3 as neither disagree nor agree, 4 as agree, and 5 as strongly agree. There were some variations to the wording of the Likert scale. For example, for some of the questions, 1 represented very little and 5 very lot, or 1 as not true at all and 5 as very true. This was done to better represent the students' ratings of their feelings to certain survey items. Student perceptions were compared between pre- and post-surveys for all three surveys.

#### Student Perceptions of Involvement in Curriculum Planning

The first survey contained six items addressing students' perceptions regarding 1) how much students learned in the past nine weeks, 2) whether students' views were valued in the classroom, 3) if students felt they were able to take control of the classroom by making decisions about their learning activities, 4) if sharing control in the classroom would make students feel their viewpoints were more valued, 5) if students thought they could learn more effectively if allowed to choose how to meet their learning objectives, and 6) how much students would prefer the teachers to be involved in decision-making. The mean scores were 3.68 on the pre-survey and 3.73 on the post-survey, which is a slight increase. The paired t-test analysis showed no statistically significant differences between pre- and post-surveys ( $t=0.598$ ,  $p=0.551$ ). Table 2 displays mean score differences for the six items in the pre- and post-surveys.



Table 2

Student Involvement in Curriculum Planning Survey Item Differences  
From Pre- to Post-Surveys

Statement	Pre-Survey Mean Score	Post-Survey Mean Score	t	p
1. How much do you feel like you learned in the past 9 weeks?	4.37	4.11	.009	.993
2. Did you feel that your views were valued in the classroom?	3.78	3.85	.399	.690
3. Did you feel like you were able to help take control of the classroom by making decisions about learning activities?	3.33	3.65	.017	.987
4. Did you feel like sharing control of the classroom (making decisions about learning) made you feel that your viewpoint was more valued?	3.69	3.81	.272	.786
5. Did you feel that you learned more effectively when allowed to choose how to meet learning objectives (discussing and altering assignments with the class)?	3.80	3.97	.148	.883
6. Would you prefer the teacher to do more or less of the decision-making in the classroom?	3.13	3.00	.319	.750

For the questions in this particular part of the survey, students rated their feelings on a 5-point Likert scale where 1 represented very little and 5 was a lot. Looking at the data in the above table, students' mean scores ranged from 3.00 to 4.37. These numbers indicate that students were fairly neutral in their feelings about control over the classroom.

The second survey addressed students' perceptions of involvement in curriculum planning. It contained 46-items that were grouped into six categories 1) student choice (8 items), 2) curriculum being interesting to students and relating to their lives (15 items), 3)

teachers' responsiveness to feedback (7 items), 4) student independence (6 items), 5) students' overall level of comfort in the classroom (4 items), and 6) students' learning behaviors (6 items). The mean scores were 2.96 on the pre-survey and 2.91 on the post-survey, which shows a slight decrease. The paired t-test analysis did not show statistically significant differences between pre- and post-surveys ( $t=0.044$ ,  $p=0.965$ ). Table 3 shows mean scores, t-test scores, and p values by category from pre- to post-surveys.

Table 3

Student Involvement in Curriculum Planning Survey Category Differences  
From Pre- to Post-Surveys

Category	Pre-Survey Mean Score	Post-Survey Mean Score	t	p
Student Choice	2.80	2.70	.009	.993
Curriculum Being Interesting to Students and Relating to Their Lives	3.13	3.07	.225	.825
Teachers' Responsiveness to Feedback	2.63	2.58	.486	.644
Student Independence	3.00	3.03	.515	.629
Students' Overall Comfort in the Classroom	2.88	2.88	.984	.398
Students' Learning Behavior	3.13	3.10	.665	.535

For the questions in this particular part of the survey, students rated their feelings on a 5-point Likert scale where 1 represented not true at all and 5 was very true. Looking at the data in the above table, students' mean scores ranged from 2.58 to 3.13. These numbers indicate that students were fairly neutral in their feelings about their involvement in curriculum planning.

Student Perceptions of Participation in Civic Engagement

Students responded to a 44-item survey regarding participation in civic engagement. The survey items were broken into six categories 1) students' future plans regarding volunteerism and community involvement (10 items), 2) cooperation skills (9 items), 3) problem solving skills (3 items), 4) awareness of local and world issues (5 items), 5) leadership skills (4 items), and 6) social justice issues (13 items). The mean scores were 3.54 on the pre-survey and 3.43 on the post-survey, which is a slight decrease. The paired t-test analysis showed no statistically significant differences between pre- and post-surveys ( $t=.0002$ ,  $p=.9998$ ). Table 4 shows the pre- to post-survey mean score differences, t-test scores, and p values broken down by category.

Table 4

Student Participation in Civic Engagement Survey Category Differences  
From Pre- to Post-Surveys

Category	Pre-Survey Mean Score	Post-Survey Mean Score	t	p
Students' Future Plans Regarding Volunteerism and Community Involvement	3.65	3.49	.001	1.000
Cooperation Skills	4.04	4.00	.295	.776
Problem Solving Skills	3.77	3.70	.435	.706
Awareness of Local and World Issues	3.48	3.37	.124	.907
Leadership Skills	3.39	3.36	.643	.566
Social Justice Issues	3.12	2.97	.010	.992

For the questions in this particular part of the survey, students rated their feelings on a 5-point Likert scale where 1 represented strongly disagree and 5 was strongly agree.

Looking at the data in the above table, students' mean scores ranged from 2.97 to 4.04. These numbers indicate that students were fairly neutral in their feelings about their participation in civic engagement.

Although there was no statistically significant difference between pre- and post-surveys for civic engagement, the largest change in mean scores was in the social justice issues category and the future plans regarding volunteerism and involvement in the community category. In the social justice issues category, three statements showed a decrease in mean score differences (between pre- and post-surveys): 1) "We need to look no further than the individual in assessing his/her problems," which showed a mean score decrease 2.87 to 2.65; 2) "It is hard for a group to function effectively when the people involved come from very diverse backgrounds," which showed a mean score decrease from 2.57 to 2.17; and 3) "I don't understand why some people are poor when there are boundless opportunities available to them," which showed a mean score decrease from 2.93 to 2.45.

Based on the mean scores and the paired t-test analyses, middle school students did not show a perception change toward their involvement in planning curriculum or civic engagement after participation in an environmental service-learning project. An analysis of individual survey items from the three surveys showed that although there were various decreases and increases in mean scores, there were no statistically significant differences between the pre- and post-surveys.

## Research Question #2

The second research question addressed how middle school students describe their experiences in participating in an environmental service-learning project regarding student involvement in curriculum planning and participation in civic engagement. Journal entries were collected from 30 students, who completed journals about their experience during the first, second, fourth, seventh, and ninth weeks. Six students participated in a focus group that met during the first week and again in the eleventh week, after completion of the environmental service-learning project. Lastly, six different students were interviewed after completion of the environmental service-learning project. Students' comments in their journal entries, focus group meetings, and individual interviews were then analyzed.

### Student Involvement in Curriculum Planning

After analyzing students' comments about their involvement in planning curriculum for the environmental service-learning project, The Garden Project, three themes emerged. Students showed satisfaction in the following three areas: 1) being able to choose what they learned about and what they created 2) being able to choose with whom they worked, and 3) the inclusion of students' interests and relevance to students' lives.

### Student Choice in What They Learned and Created

Students highlighted in their journals, focus group meetings, and interviews that they enjoyed the openness of the project because they had more freedom to choose their own ideas and had a say in both what they were learning and how they were learning. This reflects

positive student perceptions of being able to help plan their curriculum through The Garden Project.

Students mentioned in their journals their satisfaction with the project being more open, with fewer guidelines than their typical schoolwork. For example, in the middle of the project during week four Alyssa noted, “I really like it being more of an open assignment and being more free about it, and being able to make my own choices,” when asked about her favorite aspect of The Garden Project. Alyssa highlighting the open nature of the project suggests that giving student freedom in making choices may have been one of the most memorable aspects of the project.

When specifically asked whether she liked the openness of the project or she wished there were more rules and guidelines, Ashton wrote, “We weren’t just assigned to this project, we picked it and we were then happy with our choice.” This comment from Ashton was made in the fourth journal entry during the seventh week of the project, which was when the project was near completion but prior to their sharing with the local community. For the same journal prompt, Patrycja had a similar comment when she reflected, “I like that it’s open because we can do anything and make/create anything we want for The Garden Project.” Both Ashton and Patrycja’s comments show the students’ satisfaction with the open nature of the project because they felt like they had choice in what they were learning. Students’ happiness with the open nature of the project was also mentioned by students in relation to feelings of having more control in what was happening in the classroom. In her final journal entry, Melanie wrote, “I felt like I had a say in what was going on,” in response to whether she enjoyed helping to plan what to do for the project. Students’ comments in their journals

reflected positively on the open nature of The Garden Project because students were able to make personal choices and have more control of their learning.

During the focus group meetings, students mentioned appreciation for being allowed choice in both what they learned and how they demonstrated their learning. Molly commented in the second focus group after the completion of the project, “I kind of like how you gave us a subject to do it on, but then we got to pick how we wanted to do it.” Tommy agreed with this sentiment later in the focus group discussion when he said, “I liked how you could choose how you were going to present.” Both Molly’s and Tommy’s comments speak to their satisfaction with being allowed to choose how they were going to demonstrate their learning. Finn also spoke positively about having choice when he said, “I did enjoy having choice because, um, usually we don’t and you kind of got to do your own thing instead of, like, doing what the teacher tells us.” Finn’s comment suggests that students may prefer to have less teacher involvement and more student involvement in curriculum planning. It also suggests that students do not often experience this level of choice and enjoyed it. Morgan further elaborated on this idea in the first focus group meeting prior to beginning The Garden Project and suggested that this level of choice would make learning more meaningful. She said, “It would be more meaningful if the kids organized it instead of the teachers,” when asked what she thought makes learning meaningful. Because students were able to organize The Garden Project in terms of what they were learning and how they demonstrated their learning, Morgan’s comment suggests that the learning through this project was more meaningful than if the teacher had made all the decisions with the curriculum.

The theme of student satisfaction in having choice with The Garden Project carried over into the student interviews, which took place after completion of the project. When

asked what was different about the project compared to what he usually does in school, Todd remarked, “We got to choose our own paths. We got to do whatever we wanted, which I really liked because we got to choose the stuff.” Similarly, Natalie said, “We got to choose what we wanted to do with the project and had a lot more freedom,” when asked how she was allowed to help plan the curriculum. Natalie added, “I did like being able to choose what we got to do because then there were so many choices.” When Matt was asked about helping to plan curriculum, he explained, “I liked planning it because you got to set your own goals, so you are on your own time.” This implies that the students who were interviewed enjoyed having choices in the project because they were able to have more freedom than they usually have with typical school projects and were able to then set their own goals as far as what they were going to accomplish through the project. Students’ comments in the journals, focus group meetings, and interviews showed a positive student perception with being able to help plan their curriculum because it allowed for freedom that they do not generally experience in their classes and because student choice made learning more meaningful.

#### Student Choice in Whom They Worked With

Students reflected positively about being able to choose with whom they worked in The Garden Project as opposed to having the teacher select their partners. Students were able to choose, including working alone, in partners, or in larger groups. Students commented in their journals, focus group meetings, and interviews that they were pleased with the overall project because of this particular student choice feature.

In the journals, students remarked on how fun it was to get the opportunity to work with their friends. During the third week of The Garden Project, Ashley wrote, “My favorite



thing was getting to work with a group of friends while helping our school at the same time.” Similarly, Jeremy remarked, “My favorite thing about The Garden Project is that I have the chance to work with my friends.” Students’ comments supported that working with friends may also have improved the quality of work they produced. Toward the end of the project, Alyssa commented, “I really like who I am working with and feel that I have gotten more work done than I would have working with other random people,” when she was asked to reflect on whether working with those students they chose was good for their productivity or if it led to more time socializing and wasting time. As Lincoln elaborated when asked the same question, “It was easier to brainstorm ideas and the environment in our group was already nice and no one was embarrassed when sharing their ideas.” Both Alyssa’s and Lincoln’s comments indicate that students may have done more or better work due to a level of comfort when working with peers they considered friends as opposed to be assigned to work in groups with peers they did not consider friends.

Students reflected similarly in the focus group, commenting positively on being able to work with whomever they chose. Students commented on working with their friends in relation to this making the learning more fun. When asked how The Garden Project was meaningful to her after the conclusion of the project, Morgan responded, “I had fun working with my partners.” In response to the same question, Finn said, “It was fun.” Tommy elaborated during this discussion and said, “It was meaningful to me because I had fun just working with my partner.” Students’ discussion on how The Garden Project was meaningful indicates that the learning was more fun because they got to work with their friends. The students’ comments during the focus groups also suggest that student learning may have been more meaningful to students because they were allowed to make choices.

Although during the interviews the students did not mention working with their chosen friends as frequently as in the journals and focus group meetings, it was brought up in a positive way. When asked about what The Garden Project was, Lilly highlighted that the students “picked a group of people we wanted to work with or by ourselves.” Lily mentioned this choice as a main component of the project, suggesting working with the students they chose was a memorable aspect. One of the interview questions asked students whether they enjoyed being allowed to help plan the curriculum. Matt said, “We got to say how hard we were going to work that day and see what we had to get done, do our goals, and then work on what we didn’t finish at home.” This suggests that the process allowed them to better plan and monitor what they were doing. Students reflected in their journals, focus group meetings, and interviews that choosing with whom they worked was a positive experience because they were more comfortable, they had more fun, and it made the learning through The Garden Project more meaningful.

#### Inclusion of Students’ Interests and Relevance to Students’ Lives

Students commented in their journals, focus group meetings, and interviews that they enjoyed that The Garden Project allowed them to use their own interests in what they learned about and created. Students mentioned that the inclusion of their own interests made the learning more meaningful, more appealing, and more relatable to their lives. These comments reflect positively about students’ experience with being able to include their own interest in their classroom learning.

Looking at the comments made in the students’ journals, students spoke highly of being able to include their particular interests in their projects. For example, Jill reflected

during week 3, “My favorite thing is making the posters because I like to draw.” Similarly, Samantha wrote, “I like interviewing people and asking them questions” and Brian commented, “I like making the videos. They have been fun to make.” Students were able to choose their project, and many students chose to include their interests in what kind of project they were going to do and then were pleased with their decisions. Rich said, “My favorite thing about The Garden Project is learning new things that are interesting to me.” This suggests that students may have been more engaged in the project because they were interested in what they were doing and were able to draw upon their talents.

Analyzing what students said during the focus group meetings, five of the six students involved mentioned that learning was more meaningful when you could relate it to their personal life and when it was interesting to them. Prior to beginning the first focus group, Tommy explained, “I think when learning is meaningful is when you’re learning about something you really like.” In response to Tommy’s statement, April agreed, “I think it’s more meaningful to people when they’re interested and things they would want to know about instead of something that you’re just kind of learning.” These comments indicate that students believed learning would be more meaningful to them if their learning included their own personal interests. Students then brought up the importance of learning relating to their personal lives and how that makes learning more meaningful to them. Finn said, “When it relates to our personal life a little bit,” in response to what makes learning meaningful and Morgan agreed, “I think when you can relate it to life.” Students’ reflections in the focus group discussion suggest that students believe learning is more meaningful when it is interesting to them and relates to their personal lives.

Students mentioned in their interviews how happy they were to be able to include their own interests in their Garden Project. Both Matt and Todd enjoyed being able to learn more about technology. Matt said, “I got to learn more technology cause I had no clue how to use Go Animate before I did this and after I know how to use it!” when he was asked how he benefited by being allowed to help plan the curriculum. Todd commented, “I learned how to make my own website,” when asked the same question. Although Natalie did not answer this question specifically relating to her, she did suggest the same ideas as both Matt and Todd when she explained, “I know that some people are really good with iMovie and they know how to do really cool effects, so they could have made their project really cool with what they know how to do.” Natalie’s comment lends to the idea that students could benefit from being allowed to plan due to the opportunity of including their own interests in the project. The comments in the student interviews indicate that students may have been more interested in what they were learning and creating, which made the experience more enjoyable.

Based on triangulation from student comments in their journals, focus group meetings, and interviews, students reflected positively about their experience with planning curriculum in The Garden Project. Students showed satisfaction with having choice that they are not always offered in the classroom because it allowed them to include interests related to their lives and was fun, which then made the learning more meaningful to them.

#### Student Participation in Civic Engagement

After analyzing students’ comments about their participation in civic engagement during the environmental service-learning project, two themes emerged. Students showed

satisfaction in the following two areas: 1) having a good experience doing something different and 2) influencing the community in a positive way.

### Good Experience Doing Something Different

In their journals, students explained how nice it was to do The Garden Project because it was something different from what they normally did in their classes. Students mentioned that they did not previously have experience working with or in their community and appreciated the opportunity to do so. At the conclusion of the project, Ashley commented, “It was a good experience educating others because we normally don’t get to do that just in the classroom.” Similarly, when asked whether she enjoyed attending the symposium to present her project to others in the community, Samantha wrote, “I enjoyed it because it was fun to present our projects in a different way not in the classroom.” This shows students’ enjoyment with learning in a different way from what they generally did in their classes. Lastly, when asked after the completion of the project about how the project was meaningful to him, Kyle elaborated, “The Garden Project was meaningful to me because it helped us all learn in a different way about science.” This comment suggests that learning in a different way can make learning more meaningful for students.

The focus group comments were similar to those made in the student journals. In the second focus group meeting after the conclusion of the The Garden Project, Finn mentioned that he enjoyed having so many choices with the project because “usually we don’t and you kind of got to do our own thing instead of doing what the teacher tells us.” Later in the discussion, students were asked if they enjoyed working with the local community; Finn responded, “Yep, because in most projects it’s just been official to you in having the

knowledge. With this, you're not only supposed to get the knowledge, but you're also supposed to share the knowledge with the community." April expressed similar sentiment in response to Finn's comment, "I feel like we've never really done that before through a school project, so I thought it was a good experience for me." Students' positive comments suggest that students enjoyed participating with the local community through The Garden Project because it was something different than what they are accustomed to doing in the classroom.

Analyzing students' interviews, the theme of satisfaction doing something out of the ordinary also emerged. For example, Natalie said, "With The Garden Project, we did our final project with the symposium and the library. That was a lot different from most things we do because we actually got outside of school and went to the community and did something," in response to being asked about what was different about participating in The Garden Project compared to what she usually does at school. When Lilly was asked whether she enjoyed being allowed to help plan the curriculum, she supported Natalie's feelings by saying, "Yes, because you felt like you were more involved with doing it." She elaborated later in the interview in response to being asked if she enjoyed working with the local community with this project, "I wasn't really involved in the community before and now I feel like I was finally more involved." Lilly's comment suggests that she appreciated being given the chance to be involved in the community. Ryan remarked, "It was meaningful to me, it was fun, and I actually got to learn about instead of just going to a textbook and reading off that," when asked how The Garden Project was meaningful to him. The comments from the student interviews indicate that students enjoyed working with the community because it was something different from what they normally experienced in the classroom. This comment, along with students' journal responses and sentiments in both focus groups and interviews,

implies that students enjoyed the opportunity to do something outside of the school and that it made the learning through The Garden Project more meaningful to the students.

### Influencing the Community in a Positive Way

Students' comments reflect happiness in being able to work with the community and influence it in a positive way. Students mentioned that they were happy to educate others in the community as a part of their demonstration of what they learned through The Garden Project. Comments made in journals, focus group meetings, and interviews reflect positively on student participation in civic engagement through the project.

Journal reflections mentioned how good it felt to help others in the community by educating them about gardens and healthy eating. For example, early in the project, Rich wrote, "You feel like you helped and influenced the community and it feels great," when asked whether he thought it was exciting to think about how he was going to share what he learned with others in the community. After completion of The Garden Project, when asked whether he enjoyed educating others, Jones had feelings similar to Rich's when he wrote, "I know that I have helped someone and it makes me feel good about myself." Mary concurred, "It makes you feel great like you helped and really did something for the community." Students' journal comments showed reflection about being able to help out the community and how those activities made them feel good about themselves. This speaks to students' intrinsic feeling of helping others and, in turn, feeling useful.

Students also commented in their journals about how participation in their community allowed them to feel as though they were doing their part and making a difference. Alyssa's reflection was, "I really like that it is helping other people because it makes me feel that I am

doing my part in this community,” when asked whether she enjoyed the project involving the local community and not just her school community. Later in her journal after completing the project, she wrote, “It helped me realize that I can make a difference,” when asked about how The Garden Project was meaningful to her. When asked the same question, Melissa wrote similar ideas in her journal, “The Garden Project made me think I can help other people by doing simple things.” Likewise, Lincoln emphasized The Garden Project’s positive impact on the community, “The Garden Project was meaningful to me because I know that I have impacted Autumn Falls (the town) in a positive way, which is great.” These journal reflections imply that students being able to work with the community made them feel good about themselves, but also made the learning more meaningful because it positively impacted the community.

Through the focus group discussions, students also mentioned their community involvement as a positive aspect of The Garden Project because students believed that learning is more meaningful when it involves doing something good for others. In the first focus group meeting, April said, “It’s also kind of meaningful if you know you’re doing something good,” when asked how working with their local community would be meaningful to them. Finn agreed, “If you’re doing something nice for your community, it would be meaningful to me.” Later in a discussion about whether students are able to positively influence others in the community, Finn tried to persuade Grady. Grady had expressed that “we wouldn’t really make a big effect on the community as children because a lot of people would just see us as just kids trying to finish the project,” and Finn’s response was simply, “Everyone counts.” Finn’s sentiment indicates that students not only believed that helping others in their local community can make learning more meaningful, but that it also allowed



them to make a difference in the local community because they can influence others positively.

The theme of students feeling as though they positively impacted the community also emerged in the interview comments. When asked how her local community benefitted from her participation in The Garden Project, Natalie said, “They probably learned a lot from everything,” which suggests community members learning new things as a positive aspect of The Garden Project. When asked how The Garden Project was meaningful to her, Emily said, “I really wanted to give back to the community so they could learn from what I did.” This suggests that being involved with and helping the local community could make learning more meaningful for students. Students’ reflections in their journals, focus groups, and interviews suggest that students teaching others in their community about what they learned positively impacted the community and that, in turn, also made students satisfied with their learning and the learning more meaningful.

Triangulating the analysis of the student journals, focus group meetings, and individual interviews suggested that students believed The Garden Project positively impacted both themselves and the community. Concerning students helping to plan curriculum, students remarked at how the project’s level of choice and inclusion of their own interests allowed for more meaningful learning. Regarding student participation in civic engagement through The Garden Project, students reflected that they felt good about themselves because they positively impacted their local community and that this, consequently, made their learning more meaningful.

### Research Question #3

The third research question addressed how middle school students describe their personal benefits as a result of participating in an environmental service-learning project. To respond to this question, data were triangulated by looking at 30 students' journal entries, comments made during two focus group meetings, and remarks from six student interviews. Three themes emerged from analysis of the students' descriptions of their personal benefits from participation in The Garden Project. The students highlighted the following areas of personal benefit: 1) learning about gardens and nutrition, 2) learning about how to serve the community, and 3) improving life skills.

#### Learning About Gardens and Nutrition

Students reflected positively about their experience with The Garden Project because they learned more about nutrition and how to garden. Students highlighted in their journals, focus group meetings, and interviews that they enjoyed learning more about nutritious foods and what health benefits they gained by eating them. Students also expressed satisfaction in learning more about gardens and how to create a garden of their own. Lastly, students mentioned that learning about nutrition and gardens was more meaningful because they were able to share what they learned with community members. The students' sentiments reflected positively on their experiences with The Garden Project in relation to their personal benefits.

Analysis of the students' journals revealed that 27 of the 30 students mentioned fulfillment with learning about healthy eating or gardening due to their participation in The Garden Project. For example, Bree wrote, "I learned all about the healthy foods so now I

know healthy recipes that I can eat at home,” in response to the journal prompt asking how she benefitted from doing. Melissa also found that the project was meaningful to her because she learned more about healthy eating when she noted, “The Garden Project has been meaningful because it has showed me that there are good healthy options, too.” Jones also found the project to be meaningful because of what he learned, “I think The Garden Project has been meaningful to me because it has shown me the importance of having a garden.” Similarly, Tim wrote, “It was meaningful to me by showing me that I can help make a garden.” Students’ comments in their journals reflected on how important it was to them to learn about nutrition and healthy options.

In the focus group meetings, students also mentioned learning about nutrition and gardens. During the second focus group meeting, after completion of the project, the beginning of the discussion centered around how students were allowed to choose what they were learning about through The Garden Project. Finn mentioned that “you could do anything that involved being healthy,” and Molly said, “Anything that involved gardens or plants or cooking with vegetables,” in response. This implies that students were learning about nutrition and gardening as a result of their choices with the project. April expounded on this idea of what students learned, “I think it kind of depended on what you did with the project. If you were doing a cooking show, like Maddie and I did, you’d learn probably something different than someone else would if they’re doing a different project.” The students’ thoughts imply that students had the ability to select the specifics of what they learned through The Garden Project as long as it had something to do with gardens. There were minimal instructions given at beginning of the project, and students reflected on this openness in relation to what they were able to learn. In particular, April’s comment reflects

on the multitude of directions students took with their learning as long as it had something to do with gardens. One of the goals of the project was for students to learn about gardens, and April's comment shows student recognition of this.

Analyzing the comments made during student interviews, the theme of learning about nutrition and/or gardening also emerged. When asked how he benefitted from his participation in The Garden Project, Matt responded, "I learned more about the garden and I can tell more people about it." Matt not only learned more about the school garden, but he felt as though he was benefitting by being able to share his knowledge with others. Emily also mentioned her learning in conjunction with helping the local community when she said, "The Garden Project was a project that you got to figure out the nutrition of vegetables and help our community get more involved in the garden." Emily said this in her explanation of what The Garden Project was. Her thoughts reflected her learning about vegetables and their nutritional value and value of being able to share what she learned with other community members. Emily later said, "I benefitted because I got to learn things myself," when asked how she benefitted from being allowed to help plan for the project. This statement suggests that her learning through the project may have been more beneficial than other learning situations because she was able to take control as far as what she learned and how she learned. Students' comments in their journals, focus group meetings, and interviews speak not only to students' satisfaction with learning about nutrition and gardening, but how this learning was - possibly more meaningful because they were able to share what they learned with others in the community.

### Learning How to Serve the Community

The theme of learning how to work with or serve their local community emerged during analysis of the student journal responses, focus group meeting discussions, and answers to the interview questions. Students enjoyed being given the opportunity to work outside the classroom and share their knowledge with others in the community of Autumn Falls. Students highlighted serving their local community as personally benefitting them because it gave them experience working with others.

The theme of working with the community personally benefitting the students was highlighted in the students' journal entries. For instance, Kyle wrote, "I think we are benefitting because we are learning about how to help the community." It is interesting that Kyle mentioned this in his first journal entry at the very beginning of the project because it suggests that before Kyle even experienced sharing his knowledge with the community, he was seeing it as a personal benefit. Similarly, in response to being asked whether he thought it was exciting to think about how he would be sharing what he learned with others in Autumn Falls, Jones explained, "Yes, because our ideas get to be heard by people and then they get to turn them into action and we get to help people." This response was in the second journal entry, which was still toward the beginning of the project. Melissa had a comparable sentiment when she reflected in her last journal response after the completion of The Garden Project. She wrote, "The Garden Project made me think I can help other people by doing simple things." Melissa's response indicates that her realization of how she could help others was a benefit to her. In the other students' journal responses, helping others in the community was highlighted as a personal benefit.

Students involved in the focus group meetings also suggested that working with the local community due to their participation in The Garden Project was a personal benefit. After conclusion of the project, students were asked to discuss how they worked with the local community through The Garden Project. Molly excitedly talked about what her group had done to share what they learned through their project. Molly's group worked on a presentation for small children on how they can help start their own garden at home. At the library symposium where students did presentations to share what they learned, Molly's group had a room off of the children's library section to show the children a small presentation and then do a hands-on activity. As Molly said, "We taught kids how to grow a plant and gave them a little plant, so they got involved by digging, putting dirt in the cup, and watering the plant." Molly's excitement while discussing how she worked with the local community implies that this was a highlight of her experience with the project and that she enjoyed being able to share what she learned with children in the community.

In response to Molly, Morgan explained how the project was more challenging due to the sharing aspect, but she seemed pleased with being allowed this challenge because it was something new. Her response was, "I think knowing that we had to share it made it harder 'cause you wanted to make it better and then you had to figure how you were gonna share it." Morgan's comment suggests that having to determine how to share with the local community added an additional aspect to the project that made the project more challenging and interesting. Focus group comments indicated that students enjoyed showing others in the local community what they learned through The Garden Project because it was something different and more challenging than what they are typically used to doing in school.

The theme of working with the local community as a personal benefit to the students also emerged during the student interviews. For instance, during Emily's interview, she responded, "It was pretty cool to be able to present and talk about what you learned and tell and share it with other people so they know," when asked how she benefitted from her participation with the local community in The Garden Project. Similarly, Matt highlighted being able to share with others when he said, "I can tell more people about it 'cause I know more about it now." Matt's comment suggests that he not only enjoyed being able to share what he learned with others at the symposium, but that he is able to foresee sharing it with other community members in the future. When asked the same question, Lilly remarked, "I finally learned how we can really get involved, so I learned that you can become involved even if it is just small." Lilly's observation indicates that she personally benefitted by learning how to get more involved in the community. Student's reflections in the interviews on how The Garden Project benefitted them implies that they were satisfied with doing the project because they enjoyed sharing what they learned with others and being more involved in the community. These sentiments mirror the students' opinions in both the journal entries and focus group discussion.

### Improving Life Skills

The theme of fulfillment through being able to work on their cooperation skills, time management skills, writing skills, and presentation skills emerged in the students' reflections in their journals, focus group meetings, and interviews. Students expressed satisfaction with being able to learn how to work with others more cooperatively. They also thought that The Garden Project allowed them to work on their time management skills and to improve their

writing skills. Lastly, students highlighted that The Garden Project gave them the opportunity to work on speaking in front of others. Students mentioned that through The Garden Project they were able to strengthen these four life skills and noted how this would benefit them later in life, providing future use.

Students' journal responses highlighted the opportunity to work with others because they felt it allowed them to practice their cooperation skills. When asked how she benefitted from doing The Garden Project, Alyssa wrote, "It helped me realize how to work in a group better." This was a question in the last journal prompt that was asked after completion of the project. Although Jill's response of "it was meaningful because we got to learn how to work with other people," was similar, it was to a different question about how The Garden Project was meaningful to her. This implies that working cooperatively with others was not only of personal benefit, but that it also made the project more meaningful. In her first journal entry, Samantha reflected, "I also have learned some team working skills to collaborate better with my group." It is interesting that Samantha wrote this in her first journal response only a week into the project because it indicates that working cooperatively with others emerged early on as a personal benefit.

In addition to cooperation skills, students' journal responses highlighted the opportunity to present what they learned at the library symposium because it strengthened their presentation skills. Carolyn mentioned, "We get to work on our presenting and talking skills," when asked prior to the symposium about what she thought the benefits were going to be from presenting what she learned through The Garden Project at the library. Austin had a similar comment in his journal when asked after the symposium how he personally benefitted from the project. He wrote, "I also benefitted by practicing to talk in front of a group of



people and not getting nervous.” Mary elaborated in her final journal entry when writing about not only whether she enjoyed planning for the project but also how she personally benefitted from her participation in The Garden Project. She explained, “I advanced in my speaking and writing skills. I benefitted from The Garden Project because I learned to work in a group better and I learned new writing skills that I wrapped up in an article and shared with the community.” Mary’s comments in addition to other comments made in the students’ journals indicate satisfaction with the opportunity to work on their cooperation, presentation, and writing skills.

In the focus group discussions students passionately discussed the life skills in a more general fashion, focusing on how learning and practicing these skills would be beneficial to them in later life. In the first focus group when the project had just begun, students discussed the personal benefits to learning. April said, “It could affect you later in life and something good to always have some background knowledge on things.” Finn continued the discussion by saying, “When you’re older and in college and you’re trying to figure out what you’re trying to do, you’d probably use something you’re good at and you could use some of the things you learned in school.” Morgan’s comment reflects how the skills utilized during The Garden Project can be used throughout their lives when she said, “I think it’s ‘cause it helps out with your everyday life. When you use something that you learned in school while you’re doing something every day.” When asked what makes learning more meaningful, Morgan later added, “I think when you can relate it to life.” This suggests that practicing the skills of cooperation, time management, writing, and presenting became meaningful to the students because they are something students use every day and will continue to use later in life.

This theme continued in the second focus group meeting after the conclusion of The Garden Project. When asked how working with the local community was beneficial to them, Molly explained, “Yeah, it could help you prepare for later in life if you have to make a speech and present it to people.” This indicates that working on writing and presenting skills was an important aspect of the project for Molly because she could also use the skills in the future. Later in the discussion, students were asked how The Garden Project was meaningful to them. Grady brought the importance of time management when he said, “We got to learn how to manage our time and I think that’s gonna be important ‘cause when you get a job.” Grady’s reflection suggests that his time management skills were practiced through the project and that realized these skills would also be used later in life. Comments made during both focus group meetings highlight practicing life skills because it would better prepare them for their future jobs and life in general.

Comments made during the student interviews also demonstrated that students were pleased with practicing managing their time, working cooperatively, and giving presentations. When Lilly was asked how being allowed to help plan the curriculum in The Garden Project benefitted her, she remarked, “It helped you learn how to plan your own stuff.” This implies that Lilly enjoyed being able to plan because she was able to learn how improve her planning skills and work throughout the project. In response to the same question, Ryan discussed how his work through The Garden Project allowed him to work more cooperatively when he said, “We would always make decisions on how we would do it, and you would vote on which one was the best.” Ryan explained that working on this project allowed him practice at working cooperatively with others and compromising about what would be best for the collective group. Natalie highlighted how presenting The Garden Project at the library symposium

allowed her to practice her presentation skills. When asked how she benefitted from her participation in the local community with the project, she explained, “We showed everybody at the symposium what we were doing and normally we just show our other classmates, but we got to show everybody else and it kind of got us out of our comfort zones and it was different.” Natalie’s reflection implies that doing something she had not previously done allowed her to do something that was not only different but was also challenging and that this challenge was something exciting to her because she was able to practice her presentation skills. The theme of satisfaction with the life skills of time management, cooperation, writing skills, and presenting to an audience emerged when looking at the students’ comments during the interviews. As indicated in the student journals and comments made in both the focus group meetings and student interviews, students were pleased to have been given the opportunity to practice life skills. Students expressed interest in these skills not only being useful in their present lives, but that would also be beneficial to them because they could use these strengthened skills later in life.

Triangulation of the data from the student journals, focus group meetings, and interviews indicated the students were pleased to have learned more about gardening and nutrition, to have learned how to serve their community, and to have practiced life skills through their work with The Garden Project. Students expressed satisfaction with learning more about gardening and nutrition because they felt it would help them make better decisions about their eating habits and might encourage them to start a garden of their own. Students also felt that due their learning and then sharing with others, they could positively impact the decisions and eating habits of others in their local community. Lastly, through The Garden Project, students reflected on the personal benefits they gained regarding the life skills

of cooperation, time management, writing, and presenting, which would be helpful to them in both the present and as preparation for future life.

#### Research Question #4

The fourth research question addressed how middle school students describe benefits to their local community as a result of the students' participation in an environmental service-learning project. The data were triangulated through analysis of comments made in 30 student journals, two focus group meetings, and six student interviews. Three themes emerged through data analysis of students' descriptions about benefits to their local community due to students' participation in The Garden Project: 1) helping community members learn about gardens and nutrition, 2) community involvement and participation with the school garden, and 3) inspiring activism in others.

##### Helping Community Members Learn About Gardens and Nutrition

The students' comments in their journals, discussion in the focus group meetings, and remarks during interviews indicated that students felt they helped their community by teaching others about nutrition and gardens. Students commented that they enjoyed sharing what they had learned because it benefitted others. This suggests that students were satisfied with The Garden Project because they were able to see how their work benefitted the local community.

Students explained their recognition of how community members benefitted by learning more about nutrition and gardens. In fact, 29 out of the 30 students mentioned these particular benefits to their community in their journals. For example, Austin highlighted,

“They benefitted by getting to learn about healthy foods and how nutrition helps the body,” when asked after the symposium how the local community benefitted from his participation in The Garden Project. In an earlier journal entry, Austin had reflected, “Presentations can benefit the community by helping them choose nutritious foods,” in response to how the local community would benefit by coming to the symposium. These comments indicate Austin’s acknowledgement that through the symposium, community members could not only learn about nutrition, but that this knowledge could motivate them to make healthier decisions regarding what they eat. Likewise, in Erik’s first journal entry, when asked whether he enjoying helping to plan what to do for The Garden Project, he wrote, “I have enjoyed it because I’m helping people be more healthy.” In later journals, Erik wrote that “It’s meaningful to me because we are encouraging people to eat healthy,” in response to how the project was meaningful to him. This suggests that the learning was more meaningful to Erik because he was able to help others in the local community. Rich had similar comments regarding the gardens and gardening when discussing the community benefits of his work with The Garden Project. Reflecting on how his project would benefit the local community early in the project, Rich highlighted, “They will be better aware of gardening and even make their own garden.” The action that Austin mentioned as far as encouraging others to eat healthy is the same type of action Rich was foreseeing with others creating their own gardens. The students’ journals comments indicated that students acknowledged the benefits of local community members learning about nutrition and gardens due to students’ participation in The Garden Project.

Although the students did not express as much in the focus group discussions as in the journals, students did mention that the community benefitted by learning more about nutrition

and gardening. Grady simply said, “They learned about healthy eating and the garden,” when the discussion was about how working with the local community was beneficial to them. Morgan added, “They would learn how to cook some foods.” The discussion then turned to questioning to what extent the community benefitted from the students’ participation in The Garden Project. While it was brought up that perhaps it was only beneficial to some of the community members who planned on building a garden or those interested in nutrition, Finn explained, “Then it’s beneficial to those people who do.” He explained that although community members could just look up this information on the Internet, “It’d probably be more interesting if someone were to tell you than to just search on the Internet ‘cause then they can ask you to explain if they have questions.” Finn’s insight suggests that although community members could have gotten information about nutrition and gardening from the Internet, being able to interact with the students at the symposium may have been more enjoyable and effective. Students involved in the focus group meetings discussed that learning about nutrition and gardens benefitted the local community because the information was presented in an engaging manner.

Lastly, through the student interviews, there was an emergent theme of students recognizing that community members benefitted by learning more about nutrition and gardens. In the interviews, students were asked how their community benefitted from students’ participation in The Garden Project. Todd mentioned, “I think they benefitted on how to do better gardening.” This suggests that those community members who came to the symposium learned how to garden or learned more about gardening. In Emily’s interview, she explained that “they know the nutrition of certain vegetables and fruits.” Emily’s comment implies that community members learned specific information about nutrition that

might affect their eating habits. This sentiment was similar to Ryan's explanation of how his participation in The Garden Project benefitted the community. He said, "They would take their thoughts home about if they eat healthy or not. They would maybe try an experiment with one of the recipes." Ryan's group had worked on creating a cookbook offering healthy alternatives using fresh produce instead of processed foods. His reflection shared the idea that community members could not only learn about nutrition, but could actually take action by cooking in a different way. The comments from the interviews along with those made in the journals and focus group meetings indicated that students believed their participation in The Garden Project benefitted the community because community members learned more about nutrition and gardens and might be motivated to take action based on what they learned.

#### Community Involvement and Participation with The School Garden

The second theme that emerged concerning how the local community benefitted due to students' participation in The Garden Project was the ability of the project to involve the community, particularly in the GMS (the school) Garden. Students mentioned in their journals, focus group meetings, and interviews that they saw the benefit of the symposium because it allowed community members to come together to learn about the GMS garden. Students reflected positively about their role in organizing the event and experiencing success at gaining community involvement and participation with the school garden.

In the student journal entries, students expressed satisfaction and recognition of how their participation in The Garden Project allowed the community to come together to focus on the GMS garden. Students were excited about the community's awareness of what was happening with the GMS garden and wrote about the ability of their project to bring the

community together at the symposium. After conclusion of the project, Ashley reflected on how the project was meaningful to her. She wrote, “The Garden Project was meaningful to me because it brought our community together.” Ashley’s reflection implies that bringing community members together through the symposium was the most important aspect of the project. This is similar to what Brennan wrote during the first journal entry when asked whether he enjoyed being able to help plan what to do for The Garden Project. Brennan wrote, “I enjoyed it because I can help the garden get bigger and make it more of a community thing,” and later wrote, “It helped me learn how to get the community involved.” Brennan’s ideas touch on his feelings that through the project he can help bring the community together. Mary discussed her excitement with getting the community involved when she observed, “I like how it involves the community because we can really get people involved,” and continued with, “I think it makes a greater impact when we are spreading the word really far.” Mary’s comments suggest that students’ participation in The Garden Project was important because community members got involved and that this involvement is more impactful because it involves the whole community and not just the school community.

Students also expressed excitement in their journals about the possibility of the community being more involved in improving the school garden in the future. For instance, when asked in the fourth journal prompt to reflect on the benefits of presenting what she learned to community members at the library symposium, Ashley responded, “I think we will get more of the community involved.” Because the only benefit Ashley mentioned was gaining community involvement with the GMS garden, it indicates her feelings of how important this aspect was. Students reflected that due to their presentations at the symposium,



community members would come to GMS and visit the garden. Erik wrote, “Maybe some of them will check out the GMS garden,” and Brian wrote, “I think they learned about the garden and considered going to it.” These comments suggest that one of the benefits of the symposium was just getting community members to become involved by just visiting the GMS garden. Another benefit to the local community that students mentioned was improvement of the school garden. Early in the project, when asked to comment in her journal about whether she thought it was exciting to think about how she was going to present her information to the community, Sarah wrote, “I would be sharing new information to the public, teach people about nutrition, and help the garden improve.” Sarah’s last thought implies that by sharing her information at the symposium, community members would participate in the GMS garden and improve it. This idea suggests that the local community can benefit from improvement to the GMS garden. Students’ journal reflections indicate that students felt the local community benefitted from their participation in The Garden Project because of the possible improvement to the school garden, making it a more community-based effort.

During the second focus group meeting, students highlighted involvement in the GMS garden as one of the community benefits. Students in the second focus group focused on how their preparation for the library symposium drew on ways to get the community more involved. Morgan explained, “We didn’t really think about it because it could have gone for an audience of any age,” in response to the discussion centered on the audience’s demographics of those who would attend the symposium and how the students were preparing with this in mind. Morgan’s comment shows that the cooking show her group made to present at the symposium was appropriate for an-all-ages audience, which speaks to bringing

the community together. Regarding the topic of whether the students enjoyed working with the local community, students answered with a simple “Yep,” and “Yeah,” but Finn and Morgan elaborated. Finn explained that “in most projects, it’s just been official to you in having the knowledge, but with this, you’re not only supposed to get the knowledge, but you’re also supposed to share the knowledge with the community.” Morgan continued on this thread with “I think knowing that we had to share it make it harder because you wanted to make it better and then you had to figure out how you were gonna share it.” These comments imply that students considered the local community in the planning of their project and of how they were going to present what they learned. This, in turn, made the project more challenging because students had to consider effective ways to bring community members together to learn about what students focused on for their Garden Project.

In the interviews, students indicated they were satisfied with being able to bring the community together to learn more about the school garden. Students felt that their participation in the project was beneficial to community members because it used the focus of the school garden as a platform for community building. For the project, Emily worked on encouraging nutritious choices and promoting the GMS garden to the rest of the community. When asked to explain in her own words what The Garden Project was, she said, “You got to do stuff to help our community get more involved in the GMS garden.” Emily’s thought suggests that one of the highlights of the project was getting the community involved in the school garden. Later when asked how Emily thought the local community benefitted from her participation in The Garden Project, she explained, “They now know that Grant (the school) has a garden, so they maybe could stop by and see it one time.” This indicates that Emily believed that the project had the ability to bring community members together to learn about

the school garden and that the symposium had the ability to bring community members back together again if they become involved with the school garden. Similarly, Matt mentioned community involvement in the GMS garden due to the students' participation with The Garden Project. He commented, "Now the GMS garden might get more support 'cause more people know about it." Matt's comment indicates that he felt the project benefitted the local community because as more people learned about the school garden, there would be more community involvement with it, making it a better garden. Comments during the interviews in addition to those made in both the focus group meetings and the student journals suggest that the students felt their involvement with The Garden Project benefitted the local community because the library symposium brought the community together to focus on the common goal of learning about the school garden. In addition to the community learning more about the GMS garden, students indicated excitement at the possibility of the garden being improved due to more community involvement with it.

### Inspiring Activism in Others

Students highlighted the potential of community members showing future activism concerning nutrition and gardening as a benefit to the local community. Students believed that by teaching community members about nutrition and gardens, the community members would show dedication by acting on what they learned. Remarks from students in their journals, focus group meetings, and interviews all suggest that one of the benefits to the local community due to student participation in The Garden Project was the possibility of activism by local community members in the future.

Students discussed community members sharing the knowledge they gained by attending the library symposium. In her final journal entry, Jessica explained, “Now I feel like at least a chunk knows what can happen and if they share what they learned, others will know, too. A little can become a lot,” in response to whether she enjoyed teaching others in the community. Jessica’s reflection implies that although she may have only spoken to a select number of community members at the library symposium, if those share what they learned, a spiraling of the sharing may occur. This is similar to what Mary expressed in her journal when asked the same journal prompt. She wrote, “I think they can take what they have learned from us and educate even more people.” Like Jessica, Mary believed that a greater number of people can benefit from what she learned through The Garden Project due to continued sharing of what she presented at the library symposium. Jones had similar feelings when asked if he was excited about thinking of how he was going to share what he learned with others. Jones wrote, “Yes, because our ideas get to be heard by people and then they get to turn them into action and we get to help people.” This indicates Jones’s belief that while learning about something is more important, a benefit to local community members is their ability to turn this knowledge into action.

The idea of taking knowledge and turning it into action carried over into the focus group discussion. In the second focus group meeting, when the discussion was about how students’ participation on The Garden Project benefitted the local community, Grady was originally skeptical when he said, “They learned about healthy eating, the garden, and all the stuff, but it’s not like anyone’s gonna go home and actually plant stuff in the garden.” Finn questioned Grady by saying, “Like, why not?” Grady responded by saying, “Some people would, but I’m sure that 10% maybe. Not every single parent is going to go home and plant.”

Finn then said, “But then it’s beneficial to those people who do,” and Grady nodded in agreement. This discussion shows that students believed that although not everyone who came to the library symposium would be moved to action, it was beneficial for those community members who were.

Lastly, the theme of future activism was highlighted in interviews as a community benefit. Ryan commented, “They would take their thoughts home about how if they eat healthy or not and they would maybe try an experiment with one of the recipes.” Ryan’s thought was that local community members could take what they learned about nutrition and healthy recipes and act upon this at home, sharing with their families. Along the same lines, Todd and his partner created a website to help promote action with the GMS garden. Todd’s hope with the interactive website was that community members would become more involved and take further action concerning the GMS gardens and gardens in general. During the interview, Todd said, “We put a server on our website so [about] what people think we should plant next year.”. Todd’s thoughts indicate that he was hoping community members would continue to be active in their participation with the GMS garden. Similarly, Matt made a few different social media sites to help promote the garden and also to encourage continued interest in gardening and nutrition. Matt’s creation of websites allowed him to feel as though he was spreading the word to the local community with the hope of interest and action. When asked about how he worked with the local community, Matt remarked, “I posted my video on a YouTube and a Go Animate. Also, we made a Twitter and a blog account.” Matt’s blog was created in the hope of continued interest and support of the GMS garden with the addition to generate comments from others about gardening and nutrition. Although Matt hoped that eventually his blog would reach past the local community, he felt like starting with the local

community and advertising it at the library symposium was the place to start. Students' comments in the interviews, focus group meetings, and journals suggested that students thought their participation in The Garden Project benefitted the local community by being a platform for community members to take further action concerning nutrition, gardening, and the GMS garden.

Through triangulation of the data from the student journals, two focus group meetings, and six interviews, three themes emerged concerning benefits to the local community due to students' participation in The Garden Project. Students thought community members benefitted by attending the library symposium where students presented what they learned in their research for the project. Students' comments implied that students thought community members benefitted by learning more about nutrition and gardening, being involved with others in the community, and being given the tools to show future activism concerning nutrition and gardening. These comments reflect positively on students' feelings regarding their own participation in the project in conjunction with the benefits to their local community. Table 5 summarizes the emergent themes from the research study.

Table 5

## Emergent Themes from The Garden Project Research Study

Emergent Themes	Emergent Sub Themes
<b>Student Involvement in Curriculum Planning</b>	<ul style="list-style-type: none"> <li>• Choice in what they learned and created</li> <li>• Choice in whom they worked with</li> <li>• Inclusion of students' interests and relation to students' lives</li> </ul>
<b>Students Participating in Civic Engagement</b>	<ul style="list-style-type: none"> <li>• Good experience doing something different</li> <li>• Influencing the community in a positive way</li> </ul>
<b>Student Benefits</b>	<ul style="list-style-type: none"> <li>• Learning about gardens and nutrition</li> <li>• Learning how to serve the community</li> <li>• Improving life skills</li> </ul>
<b>Community Benefits</b>	<ul style="list-style-type: none"> <li>• Helping community members learn about gardens and nutrition</li> <li>• Community involvement and participation with the school garden</li> <li>• Inspiring activism in others</li> </ul>

## CHAPTER 5

### DISCUSSION

#### Discussion

NAEP's (2010) findings that only about 25% of students in grades eight through twelve are provided with civic education creates concern as to whether students in the public school setting are getting the civic education they need to become democratically active citizens in the future. Edelstein (2011) contends that learning democracy is the most crucial component of education and that educators need to consider democracy as the heart of their curriculum. Dewey (1976b) suggests that the best way to learn about democracy is to learn through democratic means or through implementation of democratic practices in the classroom. Accordingly, this study focused on utilization of democratic practices in the classroom to help foster democratic values in middle school students.

This chapter addresses the findings of the study concerning middle school students' perceptions of the inclusion of two democratic practices in an environmental service-learning project. First, the findings are substantiated by previously conducted research and literature, and conclusions about the study are made. Next, implications of how educators can utilize the inclusion of democratic practices to support a democratic education are discussed. After that, the study's significance is presented. Lastly, suggestions for future research regarding democratic practices as a part of a democratic education and democratic practices in connection with environmental service-learning projects are considered.



In this research, seventh grade students completed an environmental service-learning project, The Garden Project, which included the democratic practices of students helping to plan curriculum and participating in civic engagement in their local community. The Garden Project was a service-learning experience that allowed students to educate others in the community about the importance of gardens and healthy eating, which encouraged students to work toward a solution to a community concern in a democratic way. The act of explicitly including democratic practices in the project supported research on the necessity of this inclusion to promote democracy (Apple & Beane, 2007; Kaplan, 1997). The Garden Project also allowed students to focus on a central theme that transcended individual content areas, which supports previous research on curriculum integration (Beane, 1997; Drake, 2007; Hayes-Jacobs, 1989).

Students' perceptions both during and after their experience were analyzed to better understand their feelings and opinions about the inclusion of democratic practices in the classroom. Analysis of surveys, focus group meetings, interviews, and journal responses indicated student satisfaction with being allowed to help plan the curriculum and to participate in civic engagement. Including these democratic practices highlights the necessary teaching methods that support democratic values many middle school educators struggle to incorporate (Hou, 2009; Korfmacher, 1999). Students were also able to articulate the personal benefits and community benefits that were gained due to the democratic practices of students planning curriculum and participating in civic engagement.

### Students Planning Curriculum

This study allowed students to participate in democratic practices that involved them in their middle school garden, which was current to their lives. By experiencing democracy in their education, students are able to focus on their current lives and not just on preparation for their future life (Beane, 1997; Pate, Homestead, & McGinnis, 1997). The educational system needs to provide students with opportunities to exhibit control over their learning (Dewey, 1916a). Central to this idea is allowing student input into what they are learning and how they are learning. Putting the learner in command allows for shared responsibility and decision making, which then leads to greater civic responsibility (Obenchain, 1997). Beane (1997) notes that the idea of active democracy in the classroom is rooted in the necessity of students being involved in curriculum planning. Therefore, democratic values need to be explicit in the design and implementation of the curriculum if democracy in education is to be supported (Westheimer & Kahne, 2004). The Garden Project research study included the democratic practice of allowing students to help plan the curriculum in order to foster a democratic education.

Based on triangulation of The Garden Project student data concerning their perceptions of the inclusion of students helping to plan curriculum, the students were satisfied because they enjoyed choosing with whom they would work, what they learned about, and how they shared their knowledge with the community. Students felt as though they were in command of the decision-making processes on a daily basis. This concurs with research done by Morris (2011) in which shared power in the classroom leads to an improved learning attitude because students feel as though their feelings and opinions are more valued.

Students also reflected that The Garden Project allowed them to include personal interests in the project and made what they were learning about more relevant to their lives. Students mentioned that this put them in command of their learning; in turn, making the learning more interesting, enjoyable, and meaningful to them. This is similar to the idea that students experience ownership over their learning and increased motivation when given choices in the classroom (Drake, 2005; Hayes-Jacobs, 1989).

One benefit to service-learning projects is that they allow students to work on planning and implementing solutions to an issue that faces their local community cooperatively with their peers (Sunal & Haas, 2002). Another benefit is that focusing on a community concern that is environmentally based allows students to actively engage in environmental stewardship, which is the goal of environmental education (UNESCO, 1977). Students who work on real-world problems gain experience working in their communities and may experience success (Kaye, 2010; Korfmacher, 1999; Watkins & Braun, 2005), leading them to further community-based engagement in the future. The Garden Project research study allowed students to help plan their curriculum and work in their local community, which honed the life skills of time management, writing and presentation skills, and working cooperatively with others.

The Garden Project findings suggest that students enjoyed learning how to work collaboratively with their peers, teachers, and community members. Allowing students to make decisions regarding their project led to struggles with problem solving at times, but also to empowerment when they were able to see success with their problem solving. This concurs with previous research indicating that students' problem solving skills are

strengthened when they work collaboratively with others through service-learning projects (Hou, 2009; Korfmacher, 1999; Sunal & Haas, 2002).

In The Garden Project, students were able to address their questions regarding healthy eating and gardening. This supports previous research findings that students gain interest in what they are learning when they are given choice (Beane, 1997; Jacoby, 1996; Sunal & Haas, 2002). This also concurs with previous literature concerning students seeing relevancy in what they are learning due to being able to engage in their natural questions about the world (Beane, 1997; National Middle-school Association, 2003). Lastly, the students reflected that the learning was more meaningful to them because they had a hand in the planning of the project. This can lead to a deeper understanding of the material students learned through the project, which in turn, leads to the enduring understandings that are an integral component of education (Pate, Homestead, & McGinnis, 1997).

### Students Participating in Civic Engagement

Service-learning engages students in practicing democracy because it allows students to work together with the goal of contributing to the community (Cress, Collier, & Reitenauer, 2005; Langston, 1990; Sunal & Haas, 2002; Watkins & Braun, 2005). Allowing students to actively participate in civic engagement within their local community leads to students feeling a greater connection to their community, which further leads students to believe that they can create positive change within their community (Keen & Baldwin, 2004; Legee & Cawthorn, 2008). Hatcher and Erasmus (2008) suggested that education's main purpose is to develop the capacities of all students to become active contributors to their community. With this in

mind, The Garden Project research study allowed students to participate in their local community.

Students' perceptions about their participation with their local community in The Garden Project indicated the students enjoyed doing something different from what they were accustomed to in the classroom. Students expressed that they had not previously been involved with the community through their schooling and welcomed this change because it made their learning more meaningful. This involvement in the students' community demonstrates engagement in a democratic practice, which supports previous research that students who are involved in democracy in their classroom are able to apply their knowledge in more dynamic means (Watkins & Braun, 2005). Students in The Garden Project found the learning more meaningful, which could lead to a more dynamic application of this knowledge in the future.

Students' reflections from The Garden Project suggested that they may be more interested in solving problems in their local community because they were able to have a hand in planning and implementing what they were learning. This not only corroborates with Peters and Stearns's (2003) research, but it also indicates that students' civic responsibility may be strengthened due to their participation in civic engagement.

Additionally, findings from The Garden Project research study indicated that students felt the learning was more meaningful because they influenced the community in a positive way, which concurs with previous research (Butin, 2006). Students' reflections suggested that students felt both useful and good about themselves and what they were doing because they were educating others in the community. These reflections show students' interest in working toward a common good rather than just focusing on their own learning. This concurs

with previous research that students who work on problems within their community are then able to take greater responsibility for the welfare of others (Edelstein, 2011).

Students also expressed satisfaction with being able to participate in the library symposium in which they shared what they learned with community members. Students appreciated being given the opportunity to become involved with this planned activity because it set the stage for active sharing. The symposium was set up for them ahead of time, so students felt they could then make their own decisions about how they wanted to share their knowledge in a creative manner. Having the facilitator of a service-learning project cultivate a strong relationship with community partners, in this case the library, helped strengthen the experience for students, which supports previous research (Korfmacher, 1999; Leege & Cawthorn, 2008; Schneller, 2008).

The Garden Project contained the purposefully embedded opportunities to work with the local community, which allowed students to form relationships with others in the community as the students shared their knowledge about an environmental concern. The findings support existing literature that to create active environmental stewards, educators must purposefully engage students in practicing action skills outside of the classroom (Chawla & Cushing, 2007). The Garden Project encouraged students to become active citizens and to establish their place in the community as student educators. This supports previous research that implementing environmental situations with students leads them to take their knowledge and act upon it, becoming active citizens in the community (Dresner & Blatner, 2006).

Students reflected that they were satisfied with feeling as though they were making a difference in their local community, which may lead to student interest in future service in the

community. This sentiment is similar to past research indicating that students who participate in service-learning gained a higher commitment to working in their community (Lee, Olszewski-Kubilius, Donahue, & Weimholt, 2007).

Thus, this supports the idea that teaching for civic responsibility is most important in its ability to promote future civic engagement (Dewey, 1938). Service-learning aims to create a reciprocal means of learning to serve and serving to learn within the students' community (Permaul, 2009). Because these students worked toward serving their local community in The Garden Project, they demonstrated what it means to perform an act of service learning and expressed interest in serving their community in the future.

### Implications of the Study

Findings of The Garden Project research study present implications for how educators can implement the democratic practices of students helping to plan curriculum and participate in civic engagement in their classroom to support a democratic education. Specifically, the findings provide educators with ideas about how to implement these democratic practices in an environmental service-learning project. These findings are also beneficial to educators who are interested in engaging students in a service-learning project that is not environmentally-based because it provides educators with ideas for inclusion of democratic practices in a service-learning project of any topic or theme.

Implications from The Garden Project research study provide educators with insight into how curriculum integration around a central theme can provide students with experience in democratic practices. Students were provided with the environmentally based theme of promoting their school garden in a way that they felt was a meaningful experience for them

and for community members. This implies that educators should choose a theme that can resonate with all students on some level due to interest and availability. The theme used in this research study was promotion of the school garden to the rest of the local community. Basing the service-learning project on a particular theme allowed students to explore their own interests while uniting them with the common purpose of educating others in the community about gardens and healthy eating.

The implications of this research show educators possible means of utilizing environmental education as the vehicle for the promotion of democratic practices. Because environmental education aims to support students in becoming active environmental stewards and a democratic education aims to support students in becoming active citizens, the connection between the two is creating active citizens within their community and the world. Implications, therefore, show a link between environmental education and a democratic education that educators can use to promote the goals of both.

Next, implications from this research study show how critical it is for educators to play the role of facilitator as opposed to direct instructor. With this, the educator needs to do careful planning of the topic, help students gain clarity in their path of learning, and help students develop the necessary relationships with community members to make the service-learning process a success. Educators also need to tap into students' interest levels concerning specific topics and help them relate what they are learning to their own personal interests to make the learning more meaningful.

Important in the role of educator when facilitating students through an environmental service-learning project is helping students work cooperatively with others and planning the project around helping students realize the value of working collaboratively with their peers.



Students need to be given the opportunity to learn how to constructively disagree with others and work together to come to an amicable solution. The implications indicate that students should be given the opportunity to test their communication skills with others to resolve any conflict situations that may arise while working on a service-learning project.

Implications from The Garden Project research study highlight the importance of students using their problem solving skills to resolve any issues that arise. Because the students in this study were not given direct instruction, binding rules, and a specific topic, the students were free to explore their interests under the umbrella of a general topic. The findings show how important it was for the students to be able to work through problems regarding planning and implementation, researching, and sharing of their project on their own and with their group members in order to succeed with the project.

Lastly, it is important for the facilitator to realize that there are challenges with a service-learning project and that they are a part of the learning process for both the students and the facilitator. Students should be made aware at the beginning of the project that the educator cannot foresee all questions and problems that may arise during the process. Implications suggest that students and facilitator have an open, respectful, and trusting relationship so that the service-learning experience can be meaningful for all involved.

### Significance of the Study

The Garden Project research study showed that middle school students reflected positively about their experiences of being able to help plan the curriculum and participate in civic engagement in their local community. This study described how to utilize the connections among curriculum integration, service-learning, and environmental education to

promote democracy in education. This study presented a central-themed project that educators can use to include democratic practices in their curriculum. Most previous research has focused on the separate connections between democratic practices: 1) curriculum integration or 2) service-learning or 3) environmental education; however, this study worked to incorporate all three. The Garden Project research study included an integrated curriculum focused on a topic that was environmental in nature and allowed students to participate in civic engagement within the local community.

The study presented the benefits to both students and the local community due to students' involvement in the study. Previous research has focused on environmental service-learning's benefits and challenges in implementation and effective methods of instruction, but it has not addressed the inclusion of democratic practices. Previous research focused on democratic education has involved incorporation of democratic practices, but has not addressed the inclusion of environmental education or service-learning projects. This research study attempted to fill the gaps in previous research by including democratic practices into an environmental service-learning project.

By embedding shared responsibility in the classroom concerning decision-making and student choice, the classroom became a place of practicing democracy and the roots of a democratic education. Also including opportunities for students to participate in civic engagement, students demonstrated a greater level of civic responsibility (Obenchain, 1997). This study allowed students to take a problem in their local community and focus on the common good to identify possible solutions (Dresner & Blatner, 2006; Kaplan, 1997). Engagement in democratic practices in the classroom in this study allowed middle school

students to apply their knowledge in more meaningful ways than just learning the information in fragmented ways in their segmented classes throughout the day (Watkins & Braun, 2005).

This study identified the importance of the educator's role of understanding how to gain student interest, make the project relevant to students' lives, and guide students during the process of the service-learning project. It would be of benefit for educators to understand their students' interests prior to beginning a service-learning project so learning can be maximized as far as knowledge acquisition and meaningfulness. This process would allow for education that is rooted in relevancy to students' lives and that poses a community-based issue that are both central to democracy in education and society (Dewey, 1916a; Giroux, 1997; Noddings, 2005). The process highlights the importance of education utilizing the past in order to formulate solutions to present situations, keeping in mind that students need to be taught for the present and not an unpredictable and unforeseeable future (Beane, 1997; Dewey, 1938; Pate, Homestead, & McGinnis, 1997). Students, therefore, become more motivated because the curriculum is relevant to them (Drake, 2005; Hayes-Jacobs, 1989).

It is also helpful for educators to be aware of students' communication skills and cooperation skills prior to the project so they can foresee as many conflicts that may arise and consider how to help students in work through these conflicts in a constructive manner. It is helpful for educators to include the students in the planning and implementation of the curriculum because it allows opportunities to practice with democracy (Beane, 1997) and allows students to see the value of using their voices to communicate (Edwards, Gandini, & Forman, 1993). In this way, students feel more empowered because they are able to make decisions democratically and feel that their opinions are more valued (Morris, 2011).

### Future Research

Analyzing students' perceptions in a future study of another environmental service-learning experience may be beneficial because it would either concur this study's findings and/or be able to enrich the depth of the findings from this study. The Garden Project research focused on seventh grade students' perceptions. It would be interesting to see if students at varying ages would have similar feelings and reflections about helping to plan their curriculum and participating in civic engagement. Specifically, future research could focus on high school students' perceptions because this is when civic education is often stressed.

Because this study ran for approximately 11 weeks with a deadline of participating at a library symposium on a specific day and time, it did not allow students to work entirely at their own pace. This means that students may not have investigated everything they wanted to learn or completed the sharing portion of their project in the manner they wished. Future research may include a project that has a longer time frame and a more flexible date of completion to see if students' perceptions are different with more freedom and fewer constraints as far as timing.

This research study analyzed the inclusion of two democratic practices: students participating in curriculum planning and student participation in civic engagement in their local community. It would be useful to conduct future research highlighting and analyzing other democratic practices, such as focusing on diversity in classroom or social justice within the community. This would provide educators with feedback as to which democratic practices students appreciate most for inclusion in their curriculum.

Next, this research study allowed students to select what they were going to learn specifically under the umbrella of gardens; however, it did not allow them to explore all environmental concerns that are present in their local community. Therefore, future research in which students can select any topic under the larger theme of environmental concerns in their local community would be beneficial. Along the same lines, students were allowed choice in how they were going to share their knowledge within their local community, but not necessarily when or to what audience within the community. Future research could focus on providing students with a different form of civic engagement or allowing students to choose how they wanted to involve the community in what they were learning.

Future research focusing on the students' cognitive gains due to their participation in an environmental service-learning project would be beneficial. This research study focused on students' perceptions, but did not look at the possible cognitive gains students may have gained due to their participation. Doing some type of pre- and post-test focusing on what students learned due to their participation with an environmental service-learning project would be an interesting study.

Lastly, this research focused only on students' perceptions of the community benefits. This project only addressed the benefits to the students and their perceptions of how their project may have helped community members. It would be useful to design a study that also looks at the community members' perceptions of how the students' participation in the project benefitted them. Insight into how the community members feel about the students' work with the project would be useful in understanding if the project led to reciprocal benefits between the students and the community members.

## Conclusion

The study reiterates the importance of allowing students to participate in democracy in the classroom by being allowed to help plan the curriculum and being given opportunities to participate in civic engagement within their local community. In The Garden Project study, findings are provided on the use of democratic practices in an environmental service-learning project to support a democratic education in a middle school classroom. This study supports the use of an integrated curriculum with the theme of an environmentally based service-learning project to include democratic practices and create a satisfying and meaningful learning environment for middle school students.

The findings indicate the students appreciated being allowed to have choice in the classroom concerning what they learned and how they learned. Students also reported satisfaction with being to participate in their local community, giving back to others in sharing what they learned about gardens and healthy eating. Students' felt as though the learning through this project was more meaningful to them because of the inclusion of democratic practices. They enjoyed the choice that was involved in the process and the fact that they were doing something different than what they typically do in the classroom.

The aim of service-learning is to learn while and by serving others and the aim of environmental education is to create active environmental citizens in the future. This study's findings indicate that the middle school students realized both of these aims. In this way, an environmental service-learning project can be an example of how students can use serving others in environmental means to become more active participants in their local community and the world. It may also be an example for how the inclusion of democratic practices can

develop students who will live more democratically due to this experience and showcase the type of democratic education Dewey felt was necessary but not utilized in most educational settings.

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## APPENDIX A

### PARENT INFORMATION LETTER AND CONSENT FORM

### **CONSENT LETTER FOR PARENT/GUARDIAN**

Your child is invited to participate in a research study titled “Examination of affects on students’ perceptions of democratic practices in environmental service-learning” being conducted by doctoral student at Northern Illinois University, Mrs. Eileen Stocco.

The purpose of this research is to examine how democratic practices affect middle school students’ experiences in an environmental service-learning project. The environmental service-learning project involves the TMS Garden and how to promote it to Arlington Heights.

Students will participate in the study during school and, possibly, during lunch if they volunteer for the focus group meetings or interview. For this study, your child will be asked to complete a pre- and post-survey having to do with their experience before and after an environmental service-learning project. This survey will take no more than two 40-minute sessions, which will constitute two full science class periods. All responses will be used in the research study if consent and assent are given.

Your child will also be asked to complete weekly journal entries based on their experience with the project. Only randomly selected children will have their journal entries collected and analyzed.

If you give consent, your child may also participate in focus group meetings or an individual interview with me. Only randomly selected children will participate in the focus group meetings or an individual interview.

The benefit your child may personally receive from participating in this study is the ability to recognize democratic practices. Thus, students’ cooperation, decision-making and critical thinking skills can be enhanced by participating in an environmental service-learning project. There are minimal foreseeable risks your child could potentially experience during this study. The information obtained during this study will be a part of a doctoral dissertation and may be published in educational journals and/or presented at educational conferences. However, all information that could identify your child will be kept strictly confidential. No child will be identified by name or referred to in any form that will identify him/her.

Participation in this study is voluntary. Your decision whether or not to allow your child, as well as his/her assent to participate, will not negatively affect you or your child. Your decision whether or not to allow your child to participate, will not affect your child’s grade at all. You are free to make any inquiry, review any drafts of the research or withdraw your child from participation at any time without penalty. Your child will also indicate assent to be involved in this study and will be free to withdraw from participation at any time without penalty or prejudice. If you or your child decides not to participate in the research project, your child will still participate in the same instruction and activities (including completion of the pre- and post-survey and journal entries) during science class; I just will not use your child’s responses when I write the report.



I allow my child to be included in the following aspects of this research study.

Please check all that apply:

\_\_\_\_\_ Focus Group Meetings

\_\_\_\_\_ Individual Interview

Signature of Parent/Guardian \_\_\_\_\_ Date: \_\_\_\_\_

I grant permission to allow my child to be auditorily recorded by a digital recorder and quoted through use of a pseudonym.

Signature of Parent/Guardian \_\_\_\_\_ Date: \_\_\_\_\_

## APPENDIX B

### STUDENT INFORMATION LETTER AND ASSENT FORM

## ASSENT LETTER FOR STUDENTS

Dear Student:

I am working on my dissertation study at Northern Illinois University. A dissertation is a long writing piece that uses research and examination of something in great detail. Dissertations are usually required to get a doctoral degree.

The particular purpose of my study is to analyze student experiences in an environmental service-learning project. In particular, how your ideas about students helping to plan curriculum and students participating in their local community are affected by this environmental service-learning project. For our environmental service-learning project, we will be working with the TMS Garden and the Village of Arlington Heights.

All students will complete a survey both before and after you do an environmental service-learning project through science class. All responses will be used in the research study if consent and assent are given.

All students will also complete a weekly journal about their experiences. Only randomly selected children will have their journal entries collected and analyzed. I will only use your responses if you give assent.

I would also like you to participate in two focus group meetings, which will last 40 minutes each during lunch or an individual interview with me, which lasts 40 minutes during lunch. You may choose not to answer some of the questions in either the focus group meetings or individual interview, if you wish. Your responses will be kept confidential. Only randomly selected children will participate in the focus group meetings or an individual interview.

Whether you participate or not, your grade or anyone's opinions of you will not be affected.

You will be asked to give assent again prior to participating in the focus group meetings or individual interview.

Thank you in advance for your help. If you have questions, feel free to ask me. Or, you can have your parent or guardian contact my advisor, Dr. Eui-kyung Shin, from Northern Illinois University at [ekshin@niu.edu](mailto:ekshin@niu.edu).

Sincerely,  
Mrs. Stocco  
Department of Literacy  
Northern Illinois University



## APPENDIX C

### PRE-SURVEY AND POST-SURVEY QUESTIONS



## SURVEYS

Pre-survey given at the beginning of week 1

Post-survey given at the beginning of week 11, after conclusion of the project

### Civic Attitudes and Skills Questionnaire (CASQ) for Evaluation of Service-Learning Outcomes

**Directions:** Please circle the number that best represents how you feel about each statement.

1 = strongly disagree    2 = disagree    3 = undecided    4 = agree    5 = strongly agree

#### **PART ONE: CIVIC ACTION**

1. I plan to do some volunteer work.

1	2	3	4	5
(strongly disagree)				(strongly agree)

2. I plan to become involved in my community.

1	2	3	4	5
(strongly disagree)				(strongly agree)

3. I plan to participate in a community action program.

1	2	3	4	5
(strongly disagree)				(strongly agree)

4. I plan to become an active member of my community.

1	2	3	4	5
(strongly disagree)				(strongly agree)

5. In the future, I plan to participate in a community service organization.

1	2	3	4	5
(strongly disagree)				(strongly agree)

6. I plan to help others who are in difficulty.



(strongly disagree)

(strongly agree)

14. I can easily get along with people.

1

2

3

4

5

(strongly disagree)

(strongly agree)

15. I try to find effective ways of solving problems.

1

2

3

4

5

(strongly disagree)

(strongly agree)

16. When trying to understand the position of others, I try to place myself in their position.

1

2

3

4

5

(strongly disagree)

(strongly agree)

17. I find it easy to make friends.

1

2

3

4

5

(strongly disagree)

(strongly agree)

18. I can think analytically in solving problems.

1

2

3

4

5

(strongly disagree)

(strongly agree)

19. I try to place myself in the place of others in trying to assess their current situation.

1

2

3

4

5

(strongly disagree)

(strongly agree)

20. I tend to solve problems by talking them out.

1

2

3

4

5

(strongly disagree)

(strongly agree)

**PART THREE: POLITICAL AWARENESS**

1 2 3 4 5  
(strongly disagree) (strongly agree)

1 2 3 4 5  
(strongly disagree) (strongly agree)

1 2 3 4 5  
(strongly disagree) (strongly agree)

1 2 3 4 5  
(strongly disagree) (strongly agree)

1 2 3 4 5  
(strongly disagree) (strongly agree)

1 2 3 4 5  
(strongly disagree) (strongly agree)

**Directions:** Please circle the number that best represents how you feel about each statement.  
1 = strongly disagree    2 = disagree    3 = undecided    4 = agree    5 = strongly agree

1 2 3 4 5  
(strongly disagree) (strongly agree)

28. I am a good leader.

1 2 3 4 5  
(strongly disagree) (strongly agree)

29. I have the ability to lead a group of people.

1 2 3 4 5  
(strongly disagree) (strongly agree)

30. I would rather have somebody else take the lead in formulating a solution.

1 2 3 4 5  
(strongly disagree) (strongly agree)

31. I feel that I can make a difference in the world.

1 2 3 4 5  
(strongly disagree) (strongly agree)

## **PART FIVE: SOCIAL JUSTICE ATTITUDES**

**Directions:** Please circle the number that best represents how you feel about each statement.

1 = strongly disagree    2 = disagree    3 = undecided    4 = agree    5 = strongly agree

32. I don't understand why some people are poor when there are boundless opportunities available to them.

1 2 3 4 5  
(strongly disagree) (strongly agree)

33. People are poor because they choose to be poor.

1 2 3 4 5  
(strongly disagree) (strongly agree)

34. Individuals are responsible for their own misfortunes.

1 2 3 4 5  
(strongly disagree) (strongly agree)

35. We need to look no further than the individual in assessing his/her problems.

1 2 3 4 5  
(strongly disagree) (strongly agree)

36. In order for problems to be solved, we need to change public policy.
- 1 2 3 4 5  
(strongly disagree) (strongly agree)
37. We need to institute reforms within the current system to change our communities.
- 1 2 3 4 5  
(strongly disagree) (strongly agree)
38. We need to change people's attitudes in order to solve social problems.
- 1 2 3 4 5  
(strongly disagree) (strongly agree)
39. It is important that equal opportunity be available to all people.
- 1 2 3 4 5  
(strongly disagree) (strongly agree)

## **PART SIX: DIVERSITY ATTITUDES**

**Directions:** Please circle the number that best represents how you feel about each statement.

1 = strongly disagree    2 = disagree    3 = undecided    4 = agree    5 = strongly agree

40. It is hard for a group to function effectively when the people involved come from very diverse backgrounds.
- |                     |   |   |   |                  |
|---------------------|---|---|---|------------------|
| 1                   | 2 | 3 | 4 | 5                |
| (strongly disagree) |   |   |   | (strongly agree) |
41. I prefer the company of people who are very similar to me in background and expressions.
- |                     |   |   |   |                  |
|---------------------|---|---|---|------------------|
| 1                   | 2 | 3 | 4 | 5                |
| (strongly disagree) |   |   |   | (strongly agree) |
42. I find it difficult to relate to people from a different race or culture.
- |                     |   |   |   |                  |
|---------------------|---|---|---|------------------|
| 1                   | 2 | 3 | 4 | 5                |
| (strongly disagree) |   |   |   | (strongly agree) |



5. Do you feel that you were able to learn more effectively when allowed to choose how to meet learning objectives (discussing and altering assignments with the class)?

1  
(very little)

2

3

4

5  
(a lot)

6. Would you prefer the teacher to do more or less of the decision making in the classroom?

1  
(very little)

2

3

4

5  
(a lot)

## PART TWO

### A. Providing Choice

**Directions:** Please circle the number that best represents how you feel about each statement.

1 = not true at all      2 = a little true      3 = undecided      4 = somewhat true      5 = very true

1. When I am doing something that interests me the teacher gives me enough time to finish it.

1 (not true at all)

2

3

4

5  
(very true)

2. The teacher allows me to choose how to do my work in the classroom.

1 (not true at all)

2

3

4

5  
(very true)

3. The teacher asks us which topics we would like to study more and which we prefer to study less.

1 (not true at all)

2

3

4

5  
(very true)

4. The teacher asks us if there are things we would like to change in the way we study.

1 (not true at all)

2

3

4

5  
(very true)







18. The teacher shows me how to solve my problems by myself.

1	2	3	4	5
(not true at all)				(very true)

#### **D. Intruding**

**Directions:** Please circle the number that best represents how you feel about each statement.

1 = not true at all    2 = a little true    3 = undecided    4 = somewhat true    5 = very true

19. The teacher tells me what to do all the time.

1	2	3	4	5
(not true at all)				(very true)

20. The teacher does not allow me to work in my own pace.

1	2	3	4	5
(not true at all)				(very true)

21. The teacher interrupts me in the middle of activities that interest me.

1	2	3	4	5
(not true at all)				(very true)

22. The teacher is strict about me doing everything in her way.

1	2	3	4	5
(not true at all)				(very true)

23. The teacher stops me in the middle when I write or read interesting things.

1	2	3	4	5
(not true at all)				(very true)





1 2 3 4 5  
(not true at all) (very true)

37. The material studied in the classes with the teacher interests me.

1 2 3 4 5  
(not true at all) (very true)

### H. Negative Feelings Regarding Schoolwork:

**Directions:** Please circle the number that best represents how you feel about each statement.

1 = not true at all    2 = a little true    3 = undecided    4 = somewhat true    5 = very true

38. When studying the subjects taught by the teacher I feel stressed.

1 2 3 4 5  
(not true at all) (very true)

39. I feel angry during classes with the teacher.

1 2 3 4 5  
(not true at all) (very true)

40. In classes taught by the teacher I feel bored.

1 2 3 4 5  
(not true at all) (very true)

## I. Behavioral and Cognitive Engagement in Schoolwork

**Directions:** Please circle the number that best represents how you feel about each statement.

1 = not true at all    2 = a little true    3 = undecided    4 = somewhat true    5 = very true

41. I do more than what I am required when I study the subjects taught by the teacher.

1 2 3 4 5  
(not true at all) (very true)

42. I pay attention and attempt to follow the lesson in classes taught by the teacher.

1	2	3	4	5
(not true at all)				(very true)

43. I come to the teacher's class unprepared (without homework, without reading, etc.)

1	2	3	4	5
(not true at all)				(very true)

44. I participate in conversations and discussions that take place in the teacher's class.

1	2	3	4	5
(not true at all)				(very true)

45. In classes with the teacher, I try to look busy, but I really do not pay attention.

1	2	3	4	5
(not true at all)				(very true)

46. I try to understand the material studied in the teacher's class.

1	2	3	4	5
(not true at all)				(very true)

APPENDIX D

STUDENT JOURNAL PROMPTS



### Journal Writing

**Directions:** Please write in your journal about the environmental service-learning project once a week, or more often if you would like to.

You may wish to share about only a couple questions one week and then different ones the next week, or maybe you would like to address all the questions each week. It is your choice!

There is no limit to how much you can share and your name and entries will be kept confidential.

Also, you will not be graded on the length or content of your journal entries, so feel free to express yourself openly and honestly.

Use the following prompts when completing your weekly journal. These are just suggestions, so please feel free to write about anything concerning your experience with the environmental service-learning project.

**JOURNAL #1** – end of week 1  
November 8, 2013

1. What have you done this week for The Garden Project?
2. How have you been helping to plan what to do for The Garden Project?
3. Have you enjoyed helping to plan what to do for The Garden Project? **Why or why not?**
4. How do you think you are benefitting from doing The Garden Project?
5. What do you plan to do next week for The Garden Project? Be specific!
6. How would you rate your participation in The Garden Project this week? **Why?**  
1 = poor      2 = ok      3 = good      4 = great

**JOURNAL #2 – end of week 2**

November 15, 2013

1. What have you done this week for The Garden Project? **Be specific!**
2. How are you going to share what you have learned with others in local community?
3. How do you think people in Arlington Heights will benefit from what you have created with this project?
4. Do you think it is exciting to think about how you will share what you learn with others in the local community? **Why or why not?**
5. What do you plan to do next week for The Garden Project? **Be specific!**
6. How would you rate your participation in The Garden Project this week? **Why?**  
 1 = poor      2 = ok      3 = good      4 = great

**JOURNAL #3 – end of week 3**

November 22, 2013

1. Has The Garden Project been meaningful to you? **Why or why not?**
2. What has been your favorite thing about The Garden Project? **Why?**
3. What are some challenges you have faced working on The Garden Project?
4. What has been your greatest contribution to The Garden Project so far?
5. What would you change about The Garden Project if you could? **Why?**
6. How would you rate your participation in The Garden Project this week? **Why?**  
 1 = poor      2 = ok      3 = good      4 = great

**JOURNAL #4** – beginning of week 7  
December 17, 2013

1. What have you done lately for The Garden Project? **Be specific!**
2. Do you like that this project is really open or do you wish there were more rules and guidelines? **Why?**
3. Do you feel like working with whom you chose is a good thing or do you feel like you have spent a lot of time socializing and wasting time? **Be honest!**
4. Do you like that this project involves the local community and not just the school community? **Why or why not?**
5. What do you think are the benefits of presenting what you have learned at the local library?
6. How would you rate your participation in The Garden Project this week? **Why?**  
1 = poor      2 = ok      3 = good      4 = great

**JOURNAL #5** – beginning of week 11, after conclusion of the project  
January 14, 2014

1. Did you enjoy helping to plan what to do for The Garden Project? **Why or why not?**
2. How did your Garden Project help the local community?
3. Did you enjoy educating others in the local community? **Why or why not?**
4. How do you think you benefitted from doing The Garden Project?
5. How do you think the local community benefitted from your participation in The Garden Project?
6. Did you attend the local library Garden Project Symposium on Saturday? If yes, did you enjoy it? **Why?** If no, why didn't you attend?
7. How was The Garden Project meaningful to you?

## APPENDIX E

### FOCUS GROUP MEETING PROMPTS

### Semi-structured Focus Group – 1<sup>st</sup> Meeting

Conducted at the beginning of week 1

Date: \_\_\_\_\_

Setting: \_\_\_\_\_

Pseudonyms of students: \_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_,

*These probes will guide me as I conduct the focus group. However, I will be open to the exploration of other issues that may be suggested by the student responses.*

*The focus group will be digitally recorded and I will take notes.*

*Opening Script:* “Thank you for joining me today to answer some questions. You can share your thoughts freely since there are no right or wrong answers to the questions. If you need any clarification or have questions during the focus group, please let me know. If there are any questions you don’t want to answer, that is okay. If you feel uncomfortable or stressed at any time, please let me know and we can pause or end your involvement in the focus group. Are you ready?”

**Focus:** Initial thoughts students planning curriculum and participating in civic action

1. Have you ever been allowed to choose **what** you learn in school? Explain.
2. Have you ever been allowed to choose **how** you learn in school? Explain.
3. If you have experienced choice in school, did you enjoy it? Why or why not?
4. Have you ever worked with your local community in school? Explain.
5. If you have experienced working with your local community in school, did you enjoy it? Why or why not?
6. Do you think that working with your local community in school would be meaningful to you? Why or why not?

7. Do you think that working with your local community in school would be meaningful to the local community? Why or why not?
8. What do think are the personal benefits of learning?
9. What do you think makes learning meaningful to you?
10. How can teachers make learning more meaningful to you?

*Closing:* “Our time is up. I want to thank you for spending this time with me discussing your opinions and viewpoints.”

### Semi-structured Focus Group – 2<sup>nd</sup> Meeting

Conducted at the beginning of week 11, after conclusion of the project

Date: \_\_\_\_\_

Setting: \_\_\_\_\_

Pseudonyms of students: \_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_,

\_\_\_\_\_, \_\_\_\_\_,

*These probes will guide me as I conduct the focus group. However, I will be open to the exploration of other issues that may be suggested by the student responses.*

*The focus group will be digitally recorded and I will take notes.*

*Opening Script:* “Thank you for joining me today to answer some questions. You can share your thoughts freely since there are no right or wrong answers to the questions. If you need any clarification or have questions during the focus group, please let me know. If there are any questions you don’t want to answer, that is okay. If you feel uncomfortable or stressed at any time, please let me know and we can pause or end your involvement in the focus group. Are you ready?”

**Focus:** Personal reflection on environmental service-learning project in relation to students planning curriculum and participating in civic engagement.

1. How were you allowed to choose **what** you learned in The Garden Project?
2. How were you allowed to choose **how** you learned in The Garden Project?
3. Did you enjoy having choice in what and how you learned in The Garden Project?  
Why or why not?
4. How was the inclusion of choice in **what** you learned beneficial to you?
5. How was the inclusion of choice in **how** you learned beneficial to you?

6. How did you work with your local community in The Garden Project?
7. Did you enjoy working with your local community in The Garden Project? Why or why not?
8. How was working with your local community in The Garden Project beneficial to you?
9. How was working with your local community in The Garden Project beneficial to the local community?
10. How was The Garden Project meaningful to you?

*Closing:* “Our time is up. I want to thank you for spending this time with me discussing your opinions and viewpoints.”



## APPENDIX F

### STUDENT INTERVIEW PROMPT

### Student Interview

Conducted at the beginning of week 11, after conclusion of the project

Date: \_\_\_\_\_

Setting:

Pseudonym of student: \_\_\_\_\_

*These probes will guide me as I conduct the student interviews. However, I will be open to the exploration of other issues that may be suggested by the student responses.*

*The interviews will be digitally recorded and I will take notes.*

*Opening Script:* “Thank you for joining me today to answer some questions. If you need any clarification or have questions during the interview, please let me know. If there are any questions you don’t want to answer, that is okay. If you feel uncomfortable or stressed at any time, please let me know and we can pause or end the interview. Are you ready?”

**Interview Focus:** Personal reflection on environmental service-learning project

1. Explain in your own words what the Garden Project was.
2. What was different about participating in the Garden Project compared to what you usually do at school?
3. How were you allowed to help plan the curriculum in The Garden Project?
4. Did you enjoy being allowed to help plan the curriculum? Why or why not?
5. How did you benefit from being allowed to help plan the curriculum?
6. How did you work with the local community in The Garden Project?
7. Did you enjoy working with the local community in The Garden Project? Why or why not?
8. How did you benefit from your participation with the local community in The Garden Project?
9. How did the local community benefit from your participation in The Garden Project?
10. How was The Garden Project meaningful to you?

*Closing:* “Our time is up. I want to thank you for spending this time with me discussing your opinions and viewpoints.”